CALIFORNIA COASTAL COMMISSION
NORTH CENTRAL COAST DISTRICT
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
PHONE: (415) 904-5200
FAX: (415) 904-5400
WEB: WWW.COASTAL.CA.GOV

W10a

A-2-PAC-19-0160 (PHOENIX CAPITAL CONDOS)

JUNE 10, 2020

EXHIBITS

Table of Contents

1567 BEACH BOULEVARD – PROJECT LOCATION MAP
City of Pacifica, San Mateo County

1567 BEACH BOULEVARD
SITE CONDITION MAP

- Sewer Line
- Access to 1581 Beach Blvd & 1 Paloma Ave
- 72" Storm Drain Pipe & Outfall

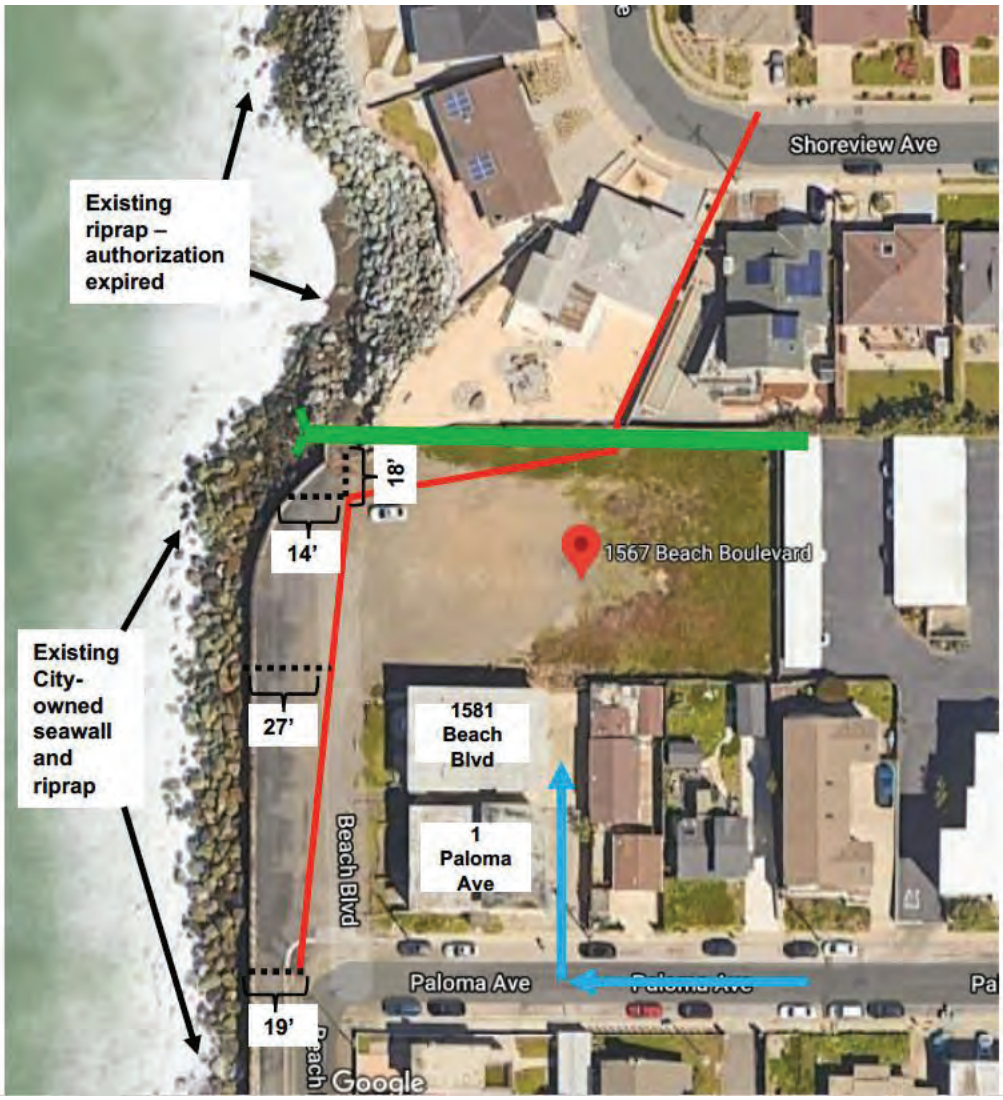


Exhibit 2
A-2-PAC-19-0160
Page 1 of 1

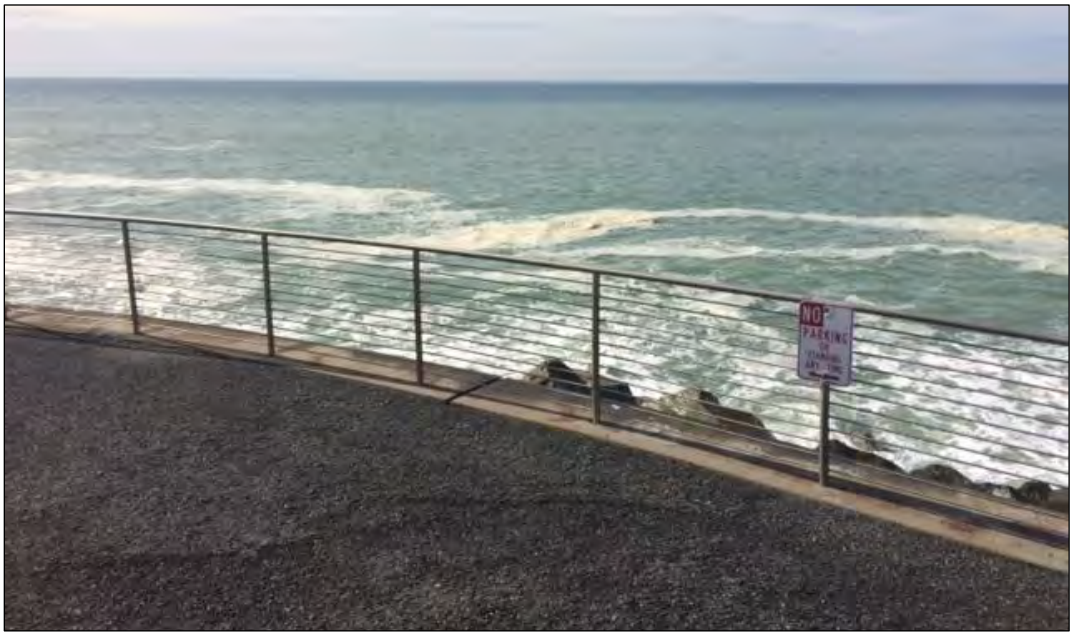
1567 BEACH BOULEVARD
SITE PHOTOS

View from Beach Boulevard roadway in front of project site, facing east and inland. Subject parcel extends to wood fence at rear.

View from corner of Beach Boulevard & Paloma Avenue. Project site is adjacent and upcoast of blue building.

View from northern end of Beach Boulevard, looking upcoast. Project site is vacant lot to the right of the end of Beach Boulevard.

View from northern end of Beach Boulevard, facing south and downcoast, with Pacifica Pier visible in the distance.



Edge of roadway and top of seawall in front and seaward of project site at northern, upcoast end of Beach Boulevard.

View looking west at northern end of Beach Boulevard, in front and seaward of the project site, during King Tides January 2020.

View from Beach Boulevard facing north and upcoast towards the intersection of Paloma Avenue, during King Tides January 2020.

CITY OF PACIFICA
Planning, Building, and Code Enforcement
1800 Francisco Blvd. • Pacifica, California 94044-2506
(650) 738-7341 • www.cityofpacifica.org

Scenic Pacifica
Incorporated Nov. 22, 1957

FINAL LOCAL ACTION NOTICE
REFERENCE # 2-PAC-19-0022
APPEAL PERIOD 7/16/19 - 7/29/19

NOTICE OF FINAL LOCAL ACTION

California Coastal Commission
Attn: Stephanie Rexing, District Supervisor
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

July 11, 2019

VIA CERTIFIED MAIL

RE: **Coastal Development Permit CDP-395-18, 1567 Beach Boulevard (APN 016-011-190)**

Pursuant to Coastal Act Section 30603(d), Coastal Commission Regulations Section 13571, and Pacifica Zoning Code Section 9-4.4304(n), this notice will serve to confirm that the City of Pacifica approved the above-referenced Coastal Development Permit, and to furnish the following additional information:

APPLICANT NAME/ADDRESS: Ciyavash Moazzami, 23 Montecito Avenue, Pacifica, CA 94044

PROJECT DESCRIPTION: Construction of one four-unit, two-story building and one three-unit, three-story building containing a total of seven "town home" style condominium units on a 19,476 square foot (0.447 acre) vacant lot.

DECISION: The subject permit was approved by the City Council of the City of Pacifica on June 24, 2019, based on the required findings contained and adopted in the resolution of approval.

APPEAL PROCEDURES: The appeals process may involve the following:

LOCAL
- ☐ The local appeal period ended on _____, and no appeal was filed; or,
- ☒ The permit was appealed to and decided by the City Council, exhausting the local appeals process.

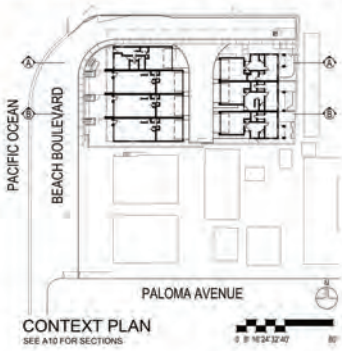
STATE
- ☒ The project IS within the Appeals Zone and the permit IS appealable to the State of California Coastal Commission if the appeal is made in writing to the Coastal Commission prior to the close of business on the 10th working day from the date of receipt of this notice by the Executive Director of the Commission. For additional information, contact the California Coastal Commission, 45 Fremont Street, Suite 2000, San Francisco, CA 94105-2219, (415) 904-5260; or,
- ☐ The project is NOT in the Appeals Zone and the permit is NOT appealable to the Coastal Commission.

Additional information may be obtained by contacting the Pacifica Planning Department at 1800 Francisco Boulevard, Pacifica, CA 94044, (650) 738-7341.

Tina Wehrmeister
Planning Director

Attachments: ☒ Resolution of Approval with conditions ☒ Staff Report(s) ☒ Meeting Minutes ☒ Project Plans

RECEIVED
JUL 15 2019
CALIFORNIA COASTAL COMMISSION
NORTH CENTRAL COAST



CONTEXT PLAN
SEE A10 FOR SECTIONS

SHEET INDEX :

SOILS ENGINEER:
GEOFORENSICS, INC.
561-D PILGRIM DRIVE
FOSTER CITY, CA 94404
ATTN: DANIEL DYCKMAN
650-349-3369

LANDSCAPE ARCHITECT :
THE GARDEN ROUTE
151 HASKINS WAY, SUITE E
SOUTH SAN FRANCISCO, CA 94080
ATTN: JOHANN HOLVICK-THOMAS
800-551-1123

CIVIL ENGINEER :
ROUND HOUSE INDUSTRIES, INC.
900 ROSITA ROAD
PACIFICA, CA 94044
ATTN: MIKE O'CONNELL
650-303-0495

ARCHITECT :
SDG ARCHITECTS, INC.
3361 WALNUT BLVD. SUITE 120
BRENTWOOD, CA 94513
ATTN: SCOTT PRICKETT
925-634-7000

APPLICANT :
CIYAVASH MOAZZAMI
23 MONTECITO AVENUE
PACIFICA, CA 94044
415-310-9195

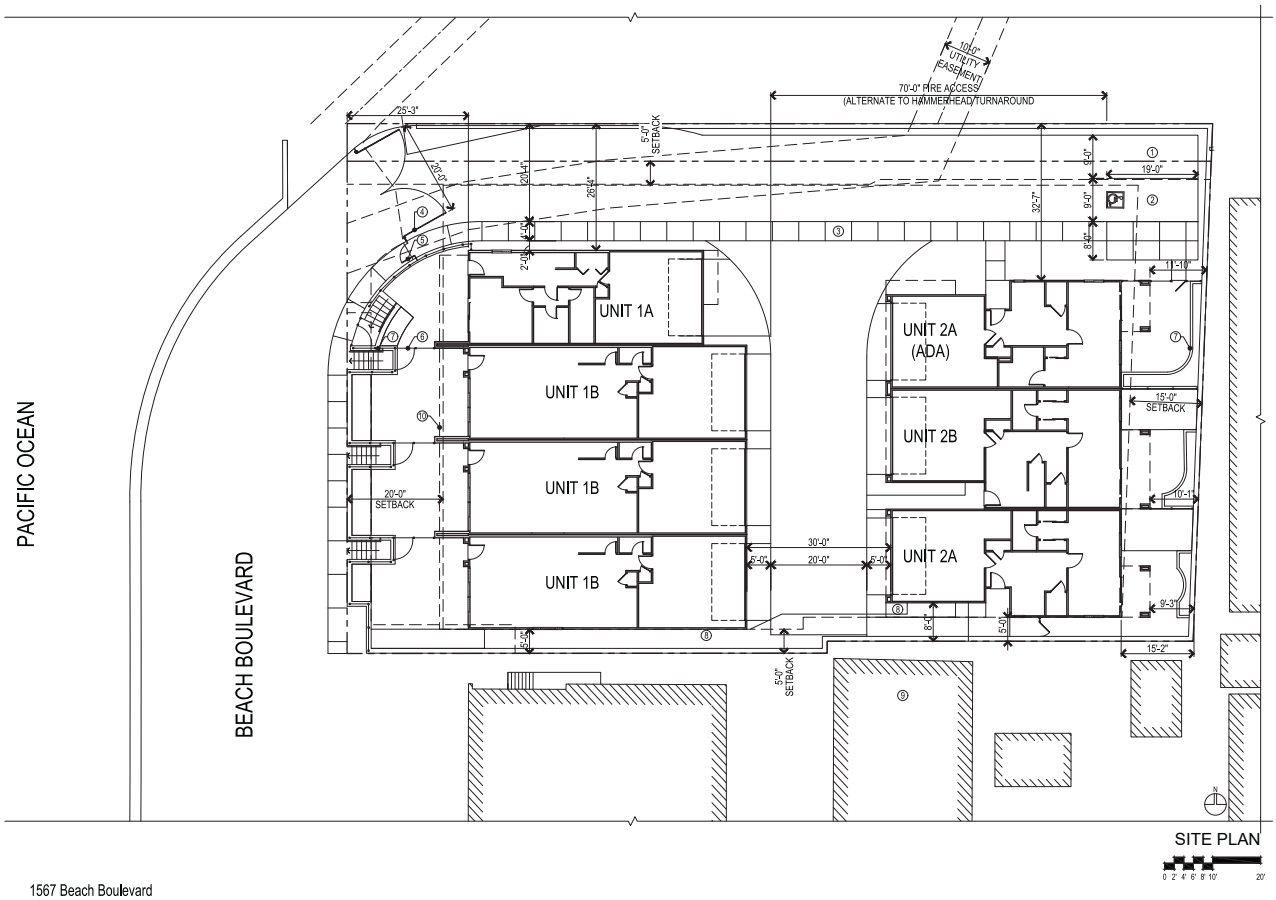
OWNER:
PACIFIC STATES CAPITAL CORP.
P.O. BOX 7602
MENLO PARK, CA 94026
ATTN: JOHN HANSEN
408-390-3069

1567 Beach Boulevard
Pacifica, CA
July 24, 2018

TITLE SHEET
T1

Pacific States Capitol Corp .
P.O. Box 7602, Menlo Park, CA 94026
408.390.3069

3361 Walnut Blvd. Suite 120 Brentwood, CA 94513
925.634.7000
www.sdgusadesign.com



SITE PLAN

0 2' 4' 6' 8' 10' 20'

KEYNOTES

① GUEST PARKING SPACE
② VAN-ACCESSIBLE SPACE
③ ACCESSIBLE PATH
④ VEHICULAR SECURITY GATE, STEEL
⑤ PEDESTRIAN ACCESS GATE
⑥ PRIVACY FENCE, TYP.
⑦ RETAINING WALL, PER L1.0
⑧ UTILITY SERVICE
⑨ EXISTING STRUCTURE, TYP.
⑩ LINE OF OVERHANG ABOVE, TYP.

1567 Beach Boulevard
Pacifica, CA
May 4, 2018

ARCHITECTURAL SITE PLAN
A1

Pacific States Capitol Corp .
P.O. Box 7602, Menlo Park, CA 94026
408.390.3069

3361 Walnut Blvd, Suite 120 Brentwood, CA 94513
925.634.7000
www.straussdesign.com

SOUTH ELEVATION

EAST ELEVATION

NORTH ELEVATION

WEST ELEVATION

EXTERIOR MATERIALS

- STONE OR TILE VENEER
- LIGHT SAND FINISH PLASTER
- GLASS RAILINGS
- METAL AWNINGS
- CABLE RAIL AT JULIET BALCONIES

1567 Beach Boulevard
Pacifica, CA
May 4, 2018

3-UNIT BUILDING ELEVATIONS
A6

Pacific States Capitol Corp .
P.O. Box 7902, Menlo Park, CA 94026
408.390.3069

3361 Walnut Blvd. Suite 120 Brentwood, CA 94513
925.634.7000
www.straussdesign.com

et Pg. 356

SOUTH ELEVATION

EAST ELEVATION

NORTH ELEVATION

WEST ELEVATION

EXTERIOR MATERIALS
- STONE OR TILE VENEER
- LIGHT SAND FINISH PLASTER
- GLASS RAILINGS
- METAL AWNINGS
- CABLE RAIL AT JULIET BALCONIES

0 1' 2' 4' 8'

1567 Beach Boulevard
Pacifica, CA
May 4, 2018

4-UNIT BUILDING ELEVATIONS
A8

Pacific States Capitol Corp .
P.O. Box 7902, Menlo Park, CA 94026
408.390.3069

3361 Walnut Blvd. Suite 120 Brentwood, CA 94513
925.634.7000
www.straussdesign.com

SDG

et Pg. 358

* * * Communication Result Report (Jul. 29. 2019 12:31PM) * * *

1)
2)

Date/Time: Jul. 29. 2019 12:28PM

File No.	Mode	Destination	Pg(s)	Result	Page Not Sent
0309	Memory TX	914159045400	P. 26	OK	

Reason for error
E. 1) Hang up or line fail
E. 2) Busy
E. 3) No answer
E. 4) No facsimile connection
E. 5) Exceeded max. E-mail size
E. 6) Destination does not support IP-Fax

STATE OF CALIFORNIA – THE RESOURCES AGENCY
GAVIN NEWSOM, GOVERNOR

CALIFORNIA COASTAL COMMISSION
NORTH CENTRAL COAST DISTRICT OFFICE
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5260 FAX (415) 904-5400 TDD (415) 597-5885

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT

Please Review Attached Appeal Information Sheet Prior To Completing This Form.

SECTION I. Appellant(s)

Name: GRG/PACIFIC VENTURES, LTD., a California limited partnershi

Mailing Address: c/o Aaronson Dickerson Cohn Lanzone 1001 Laurel St. Ste A

City:	Zip Code:	Phone:
San Carlos	94070	650-453-3905

SECTION II. Decision Being Appealed

1. Name of local/port government:

City of Pacifica

2. Brief description of development being appealed:

Development of a vacant 0.45 acre beach front parcel with seven (7) townhome units.

3. Development's location (street address, assessor's parcel no., cross street, etc.):

Vacant 0.45 acre parcel located at 1567 Beach Blvd., Pacifica (APN 016-011-190) at the northern terminus of the Beach Blvd. public right-of-way, approximately 118 ft. north of the intersection of Paloma Ave. and Beach Blvd. -West Sharp Park.

4. Description of decision being appealed (check one.):

☐ Approval; no special conditions

☑ Approval with special conditions:

☐ Denial

Note: For jurisdictions with a total LCP, denial decisions by a local government cannot be appealed unless the development is a major energy or public works project. Denial decisions by port governments are not appealable.

TO BE COMPLETED BY COMMISSION:

APPEAL NO: _____

DATE FILED: _____

DISTRICT: _____

Exhibit 5
A-2-PAC-19-0160
Page 1 of 83

CALIFORNIA COASTAL COMMISSION
NORTH CENTRAL COAST DISTRICT OFFICE
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5260 FAX (415) 904-5400 TDD (415) 597-5885

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT

Please Review Attached Appeal Information Sheet Prior To Completing This Form.

SECTION I. Appellant(s)

Name: GRG/PACIFIC VENTURES, LTD., a California limited partnershi

Mailing Address: c/o Aaronson Dickerson Cohn Lanzone 1001 Laurel St. Ste A

City:	Zip Code:	Phone:
San Carlos	94070	650-453-3905

SECTION II. Decision Being Appealed

1. Name of local/port government:

City of Pacifica

2. Brief description of development being appealed:

Development of a vacant 0.45 acre beach front parcel with seven (7) townhome units.

3. Development's location (street address, assessor's parcel no., cross street, etc.):

Vacant 0.45 acre parcel located at 1567 Beach Blvd., Pacifica (APN 016-011-190) at the northern terminus of the Beach Blvd. public right-of-way, approximately 118 ft. north of the intersection of Paloma Ave. and Beach Blvd. -West Sharp Park.

4. Description of decision being appealed (check one.):

☐ Approval; no special conditions

☑ Approval with special conditions:

☐ Denial

Note: For jurisdictions with a total LCP, denial decisions by a local government cannot be appealed unless the development is a major energy or public works project. Denial decisions by port governments are not appealable.

TO BE COMPLETED BY COMMISSION:

APPEAL NO: _____

DATE FILED: _____

DISTRICT: _____

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 2)

5. Decision being appealed was made by (check one):

- ☐ Planning Director/Zoning Administrator
- ☑ City Council/Board of Supervisors
- ☐ Planning Commission
- ☐ Other

6. Date of local government's decision: June 24, 2019

7. Local government's file number (if any): CDP 395-18

SECTION III. Identification of Other Interested Persons

Give the names and addresses of the following parties. (Use additional paper as necessary.)

a. Name and mailing address of permit applicant:
Please see Attachment 1 listing the applicant and property owner identified in the City staff report to the Planning Commission dated May 6, 2019, as well as a second applicant named in the letter to the Mayor dated June 5, 2019 from Armruster Goldsmith & Delvac LLP.

b. Names and mailing addresses as available of those who testified (either verbally or in writing) at the city/county/port hearing(s). Include other parties which you know to be interested and should receive notice of this appeal.

(1) Please see Attachment 2.

(2)

(3)

(4)

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 3)

SECTION IV. Reasons Supporting This Appeal

PLEASE NOTE:

- Appeals of local government coastal permit decisions are limited by a variety of factors and requirements of the Coastal Act. Please review the appeal information sheet for assistance in completing this section.
- State briefly **your reasons for this appeal**. Include a summary description of Local Coastal Program, Land Use Plan, or Port Master Plan policies and requirements in which you believe the project is inconsistent and the reasons the decision warrants a new hearing. (Use additional paper as necessary.)
- This need not be a complete or exhaustive statement of your reasons of appeal; however, there must be sufficient discussion for staff to determine that the appeal is allowed by law. The appellant, subsequent to filing the appeal, may submit additional information to the staff and/or Commission to support the appeal request.

Please see Attachment 3, Letter from Camas J. Steinmetz, Esq. of Aaronson Dickerson Cohn & Lanzone

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 4)

SECTION V. Certification

The information and facts stated above are correct to the best of my/our knowledge.

Signature of Appellant(s) or Authorized Agent

Date: July 26, 2019

Note: If signed by agent, appellant(s) must also sign below.

Section VI. Agent Authorization

I/We hereby authorize Camas J. Steinmetz, Esq.
to act as my/our representative and to bind me/us in all matters concerning this appeal.

Signature of Appellant(s)

Date: July 26, 2019

Attachment 1 – Applicant Parties

Applicant of Record per May 6, 2019 Planning Commission Staff Report

Ciyavash Moazzami

23 Montecito Avenue

Pacifica, CA 94044

Owner of Record per May 6, 2019 Planning Commission Staff Report

Phoenix Capital LXV LLC

PO Box 7602

Menlo Park, CA 94062

Applicant stated in Letter from Armbruster, Goldsmith & Delvac LLP dated June 5, 2019

Pacific States Capital Corporation

530 Oak Grove Ave., Ste.

202-203 Menlo Park, CA 94062

Attachment 2 – List of Testifying Parties

1	Cheryl Henley	15 Paloma Ave. Pacifica, CA 94044	Appellant of Planning Commission approval
2	Sue Elderidge	Pacifica	Testified at 5/6/19 PC hearing Testified at 6/24/19 Council hearing
3	Lauren Black	Pacifica	Testified at 5/6/19 PC hearing
4	Steven Clark	Smclark331@gmail.com 7 Paloma Ave. Pacifica CA, 94044	Letter to PC dated 5/1/19 Testified at 5/6/19 PC hearing Letter to City Council dated 6/18/19 Testified at 6/24/19 Council hearing
5	Jonathan Mizraki	Pacifica	Testified at 5/6/19 PC hearing
6	Jeff Dam	Pacifica	Testified at 5/6/19 PC hearing
7	Kieffer Katz	Pacifica	Testified at 5/6/19 PC hearing
8	Tiffany Zammit	Pacifica	Testified at 5/6/19 PC hearing
9	Joel Silver	Pacifica	Testified at 5/6/19 PC hearing
10	Beth Lemke	Pacifica	Testified at 5/6/19 PC hearing
11	Nick Langhoff	Pacifica	Testified at 5/6/19 PC hearing Testified at 6/24/19 Council hearing
12	David Zimmer	Pacifica	Testified at 5/6/19 PC hearing
13	Erin Macias	Pacifica	Testified at 5/6/19 PC hearing
15	David Leal	Pacifica	Testified at 5/6/19 PC hearing
16	Brian O'Flynn	Pacifica	Testified at 5/6/19 PC hearing Testified at 6/24/19 Council hearing
17	Scott Frazier	Pacifica	Testified at 5/6/19 PC hearing
18	Robine Runneals	Pacifica	Testified at 5/6/19 PC hearing Testified at 6/24/19 Council hearing
18	Stan Zeavin	Pacifica margstan@sbcglobal.net	Email to Council dated 5/17/19 Testified at 6/24/19 Council hearing
19	Linda Mar	Pacifica	Email to Council dated 5/17/19
20	James Kremer, PHD, 5	5 Eastlake Ave Pacifica, CA 94044	Letter to Council dated 5/27/19
21	Kimberly Shultz,	1 Paloma Ave. #3 Pacifica, CA 94044	Letter to Council dated 6/7/19

22	Tom Thompson	talltom@rwthompson properties.com	Email to PC dated 4/30/19 Email to Council dated 6/7/19
23	Craig Joyner	244 Shoreview Ave. Pacifica, CA 94044 rcraigjoyner@gmail.com	Email to Council dated 6/11/19 Testified at 5/6/19 PC hearing Testified at 6/24/19 Council hearing
23	Debra Crumrine,	1121 Miador Terr, Pacifica, CA 94044 debcrime@yahoo.com	Email to Council dated 6/13/19
25	Sabrina Ho	625 Hickey Blvd, Apt 8 Pacifica, CA 94044 Sabrina.ho11@gmail.com	Email to Council dated 6/14/19
26	Nancy Merchant	77 Paloma Ave. #201 Pacifica, CA 94044	Letter to Council dated 6/14/19
27	Lauren Black	252 Shoreview Ave. Pacifica, CA 94044 Lauren.black@mac.com	Email to Council dated 6/18/19
28	Margaret Goodale		Letter to Council stamped 6/18/19 Testified at 6/24/19 Council hearing
29.	Cindy Abbott	West Sharp Park Pacifica, CA 94044	Letter to Council dated 6/18/19 Testified at 6/24/19 Council hearing
30.	Lesley Ewing, Sr. Coastal Engineer	California Coastal Commission 45 Fremont Street, Suite 2000 San Francisco, CA 94105	Email to Michael Endicot and Michaelle Jesperson dated 5/25/2007
31.	Patrick Foster, North Central District Planner	California Coastal Commission 45 Fremont Street, Suite 2000 San Francisco, CA 94105	Letter to Planner dated 3/13/19
32.	Julia Koppman Norton, North Central District Planner	California Coastal Commission 45 Fremont Street, Suite 2000 San Francisco, CA 94105	Email to Planner dated 6/20/19
33.	Jeannine Manna, North Central District Manger	California Coastal Commission 45 Fremont Street, Suite 2000 San Francisco, CA 94105	Letter to Planning Director dated 5/6/19
34.	Kevin Bode & Sofie Khan	20 Santa Rosa, Avenue Pacifica, CA 94044	Letter to PC dated 4/24/19
35.	David & Krissy Zimmer	17 Montecito Ave. Pacifica, CA 94044	Letter to PC dated 4/25/19
36.	Tony Uccelli	Palmetto Property Owner tuccelli@prodigy.net	Email to PC dated 4/26/19
37.	Hauser Family	Pacific Manor Pacifica, CA 94044	Letter to PC dated 4/26/19
38.	Margo McGrath	Pacifica	Testified to Council on 6/24/19
39.	Bob Rouse		Testified at 6/24/19 Council hearing

40.	Tygarjas Bigstyck	Pacifica	Testified at 6/24/19 Council hearing
41.	Cynthia Kaufman Pacifica Climate Committee	Pacifica	Testified at 6/24/19 Council hearing
42.	Celeste Langille	Pacifica	Testified at 6/24/19 Council hearing
43.	Xana Cook	Pacifica	Testified at 6/24/19 Council hearing
44.	Paul Jones	Pacifica	Testified at 6/24/19 Council hearing
45.	Joel Silver	Pacifica	Testified at 6/24/19 Council hearing
46.	Jeff Dam	Pacifica	Testified at 6/24/19 Council hearing

APN 016031270
The Occupant
98 CARMEL AVE
PACIFICA, CA 94044

APN 016012080
The Occupant
80 PALOMA AVE
PACIFICA, CA 94044

APN 016012250
The Occupant
73 CARMEL AVE
PACIFICA, CA 94044

APN 016012240
The Occupant
65 CARMEL AVE
PACIFICA, CA 94044

APN 016012280
The Occupant
60 PALOMA AVE
PACIFICA, CA 94044

APN 016031160
The Occupant
47 SANTA MARIA AVE
PACIFICA, CA 94044

APN 016012020
The Occupant
4 PALOMA AVE
PACIFICA, CA 94044

APN 016012320
The Occupant
32 PALOMA AVE
PACIFICA, CA 94044

APN 016011180
The Occupant
29-35 PALOMA AVE
PACIFICA, CA 94044

APN 009284090
The Occupant
285 SHOREVIEW AVE
PACIFICA, CA 94044

APN 016012310
The Occupant
88 PALOMA AVE
PACIFICA, CA 94044

APN 016031020
The Occupant
8 CARMEL AVE
PACIFICA, CA 94044

APN 016012070
The Occupant
70 PALOMA AVE
PACIFICA, CA 94044

APN 016012260
The Occupant
62 PALOMA AVE
PACIFICA, CA 94044

APN 016031060
The Occupant
60 CARMEL AVE
PACIFICA, CA 94044

APN 016031050
The Occupant
44 CARMEL AVE
PACIFICA, CA 94044

APN 016031040
The Occupant
38 CARMEL AVE
PACIFICA, CA 94044

APN 009281300
The Occupant
296 SHOREVIEW AVE
PACIFICA, CA 94044

APN 009281290
The Occupant
290 SHOREVIEW AVE
PACIFICA, CA 94044

APN 009281280
The Occupant
282 SHOREVIEW AVE
PACIFICA, CA 94044

APN 016012120
The Occupant
87 CARMEL AVE
PACIFICA, CA 94044

APN 016011160
The Occupant
77 PALOMA AVE
PACIFICA, CA 94044

APN 016011100
The Occupant
7 PALOMA AVE
PACIFICA, CA 94044

APN 016031070
The Occupant
62 CARMEL AVE
PACIFICA, CA 94044

APN 016031150
The Occupant
59 SANTA MARIA AVE
PACIFICA, CA 94044

APN 016012150
The Occupant
41 CARMEL AVE
PACIFICA, CA 94044

APN 016031170
The Occupant
35 SANTA MARIA AVE
PACIFICA, CA 94044

APN 009284080
The Occupant
295 SHOREVIEW AVE
PACIFICA, CA 94044

APN 016012160
The Occupant
29 CARMEL AVE
PACIFICA, CA 94044

APN 009284100
The Occupant
275 SHOREVIEW AVE
PACIFICA, CA 94044

APN 009281270
The Occupant
274 SHOREVIEW AVE
PACIFICA, CA 94044

APN 009281250
The Occupant
260 SHOREVIEW AVE
PACIFICA, CA 94044

APN 016031180
The Occupant
25 SANTA MARIA AVE
PACIFICA, CA 94044

APN 009281220
The Occupant
236 SHOREVIEW AVE
PACIFICA, CA 94044

APN 009281200
The Occupant
220 SHOREVIEW AVE
PACIFICA, CA 94044

APN 016031030
The Occupant
20 CARMEL AVE
PACIFICA, CA 94044

APN 009284070
The Occupant
196 SURF ST
PACIFICA, CA 94044

APN 009283090
The Occupant
185 SURF ST
PACIFICA, CA 94044

APN 016031310
The Occupant
1777-1781 Beach Blvd
PACIFICA, CA 94044

APN 016012210
The Occupant
1669 BEACH BLVD
PACIFICA, CA 94044

APN 009281260
The Occupant
266 SHOREVIEW AVE
PACIFICA, CA 94044

APN 009284120
The Occupant
255 SHOREVIEW AVE
PACIFICA, CA 94044

APN 009284130
The Occupant
245 SHOREVIEW AVE
PACIFICA, CA 94044

APN 009284140
The Occupant
235 SHOREVIEW AVE
PACIFICA, CA 94044

APN 009281320
The Occupant
212 SHOREVIEW AVE
PACIFICA, CA 94044

APN 016012010
The Occupant
2 PALOMA AVE
PACIFICA, CA 94044

APN 009283080
The Occupant
195-195A SURF ST
PACIFICA, CA 94044

APN 009284060
The Occupant
180 SURF ST
PACIFICA, CA 94044

APN 016031280
The Occupant
1704 PALMETTO AVE
PACIFICA, CA 94044

APN 009284050
The Occupant
166 SURF ST
PACIFICA, CA 94044

APN 009284110
The Occupant
265 SHOREVIEW AVE
PACIFICA, CA 94044

APN 009281240
The Occupant
252 SHOREVIEW AVE
PACIFICA, CA 94044

APN 009281230
The Occupant
244 SHOREVIEW AVE
PACIFICA, CA 94044

APN 016012170
The Occupant
23 CARMEL AVE
PACIFICA, CA 94044

APN 009281170
The Occupant
204 SHOREVIEW AVE
PACIFICA, CA 94044

APN 016031010
The Occupant
2 CARMEL AVE
PACIFICA, CA 94044

APN 009281150
The Occupant
186 SHOREVIEW AVE
PACIFICA, CA 94044

APN 016031300
The Occupant
1785 BEACH BLVD #30
PACIFICA, CA 94044

APN 016012200
The Occupant
1671 BEACH BLVD
PACIFICA, CA 94044

APN 009283100
The Occupant
165 SURF ST
PACIFICA, CA 94044

APN 016022340
The Occupant
1625 PALMETTO AVE
PACIFICA, CA 94044

APN 016022280
The Occupant
1609 PALMETTO AVE
PACIFICA, CA 94044

APN 009283110
The Occupant
155 SURF ST
PACIFICA, CA 94044

APN 016021320
The Occupant
1501 PALMETTO AVE
PACIFICA, CA 94044

APN 016011170
The Occupant
15 PALOMA AVE
PACIFICA, CA 94044

APN 009283120
The Occupant
135 SURF ST
PACIFICA, CA 94044

APN 016012180
The Occupant
11 CARMEL AVE
PACIFICA, CA 94044

APN 016011110
The Occupant
1 PALOMA AVE
PACIFICA, CA 94044

APN 016012110
The Occupant
1620 PALMETTO AVE
PACIFICA, CA 94044

APN 016011120
The Occupant
1581 BEACH BLVD
PACIFICA, CA 94044

APN 016021380
The Occupant
1525 Palmetto Ave
Pacifica, CA 94044

APN 009284040
The Occupant
150 SURF ST
PACIFICA, CA 94044

APN 009292070
The Occupant
1427 PALMETTO AVE
PACIFICA, CA 94044

APN 009283130
The Occupant
125 SURF ST
PACIFICA, CA 94044

APN 009283140
The Occupant
105 SURF ST
PACIFICA, CA 94044

APN 016012190
The Occupant
1 CARMEL AVE
PACIFICA, CA 94044

APN 016012300
The Occupant
1610 PALMETTO AVE
PACIFICA, CA 94044

APN 016011190
The Occupant
1567 BEACH BLVD
PACIFICA, CA 94044

APN 016021330
The Occupant
1517 PALMETTO AVE
PACIFICA, CA 94044

APN 016031230
The Occupant
15 SANTA MARIA AVE
PACIFICA, CA 94044

APN 009284030
The Occupant
136 SURF ST
PACIFICA, CA 94044

APN 009284020
The Occupant
120 SURF ST
PACIFICA, CA 94044

APN 009284010
The Occupant
104 SURF ST
PACIFICA, CA 94044

1567 Beach 500' Radius Mailer

165

APN 009284010
Seidman Karen Tr
104 Surf St
Pacifica, CA 94044

APN 009284020
Walker Laurence T Tr
120 Surf St
Pacifica, CA 94044-2233

APN 009283130
Elizarraraz Pascual
125 Surf St
Pacifica, CA 94044-0000

APN 016011170
Henley Cheryl D Tr Et Al
15 Paloma Ave
Pacifica, CA 94044-2242

APN 009283110
Skeeter-Sbehrens Amy
155 Surf St
Pacifica, CA 94044

APN 016012160
Nelson Gustav J Tr
165 Carmel Ave
Pacifica, CA 94044

APN 009281470
City Of Pacifica
170 Santa Maria Ave
Pacifica, CA 94044-2506

APN 016011120
Langhoff Nicholas
182 Ashton Avenue
San Francisco, CA 94112

APN 009283080
Fadin David A Tr
195 Surf St
Pacifica, CA 94044-0000

APN 016012010
Montgomery Charles
2 Paloma Ave
Pacifica, CA 94044

APN 009283140
Rogennitter Daniel P
105 Surf St
Pacifica, CA 94044-2234

APN 016012300
Tanuwidjaja Tri Putra Hadijah
121 Laurie Meadows Dr #554
San Mateo, CA 94403

APN 016031150
Woo Terry R Tr
130 Pacheco St
San Francisco, CA 94116-1437

APN 009284070
Johnson Mike & Cindy M
150 Surf St
Pacifica, CA 94044-2233

APN 016011110
Hughes Margaret C Tr
16 Christopher Ct
Daly City, CA 94015

APN 016012210
Bogdanov John D
1669 Beach Blvd
Pacifica, CA 94044

APN 016031300
Johnson Rhonda
1785 Beach Blvd
Pacifica, CA 94044

APN 016012180
Gallion Flavia R
1839 39th Ave
San Francisco, CA 94122-4037

APN 009283100
Ramirez Victor Tr
196 Shell St
Pacifica, CA 94044-2227

APN 016031030
Stege Ruth R Tr
20 Carmel Ave
Pacifica, CA 94044-2548

APN 016011160
Grg/Pacific Ventures Ltd
1050 Ralston Ave
Belmont, CA 94002-2210

APN 009281300
Chapman William W & Nancy C
1228 Lerida Way
Pacifica, CA 94044-3634

APN 009283120
Strange Keith Roger Tr
135 Surf St
Pacifica, CA 94044-2234

APN 016021330
Claussen Francis W Tr
1501 Palmetto Ave Ste 10
Pacifica, CA 94044-2285

APN 016012110
1620 Palmetto Llc
1620 Palmetto Avenue
Pacifica, CA 94044

APN 016012200
Raymond John D Tr
1671 Beach Blvd
Pacifica, CA 94044-2237

APN 009284060
Reid David Tr
180 Surf Street
Pacifica, CA 94044

APN 009281460
Rusali Dedy I
186 Shoreview Ave
Pacifica, CA 94044

APN 016012280
Gibbs Christopher D Tr
2 Buffalo Ct
Pacifica, CA 94044

APN 009281170
Shedd Brent E
204 Shoreview Avenue
Pacifica, CA 94044

APN 009284040
Lassahn T Anne Tr
2075 Pioneer Ct
San Mateo, CA 94403

APN 009284140
Gauci Suzanne Geralyn
235 Shoreview Avenue
Pacifica, CA 94044-6681

APN 009281240
Black Lauren L Tr
252 Shoreview Ave
Pacifica, CA 94044-2231

APN 009284110
Ermis Joel C
265 Shoreview Ave
Pacifica, CA 94044-2232

APN 009281280
Dwyer Stephen
282 Shoreview Ave
Pacifica, CA 94044-2231

APN 009281290
Sakkal Eseta U & Samir A
290 Shoreview Ave
Pacifica, CA 94044-2231

APN 009281220
Pressman Jason M Tr
3130 Alpine Road #288
Portola Valley, CA 94028

APN 016031060
Egan Steve G
3214 Upper Lock Ave
Belmont, CA 94002-1317

APN 016031010
Gallagher Kathileen A
38 Renz Rd
Mill Valley, CA 94941-1726

APN 009281320
Mukhopadhyay Debasish Tr
4211 Pomona Ave
Palo Alto, CA 94306

APN 009281200
Zamora-Hernandez Carlos Tr
220 Shoreview Ave
Pacifica, CA 94044-2231

APN 009284130
Kahn David Nathan Tr
245 Shoreview Avenue
Pacifica, CA 94044

APN 009284120
Carney Richard E L/E
255 Shoreview Ave
Pacifica, CA 94044-0000

APN 009281270
Woods William Hunter
274 Shoreview Avenue
Pacifica, CA 94044

APN 009284090
Matteucci Michael J
285 Shoreview Ave
Pacifica, CA 94044-2232

APN 009284080
Dsouza Lester M
295 Shoreview Ave
Pacifica, CA 94044-2232

APN 016022280
Flaherty Michael L & T E Trs
3195 Dublin Dr
South San Francisco, CA 94080-5329

APN 016031170
East Robert A
35 Santa Maria Ave
Pacifica, CA 94044-2502

APN 016031310
Gallagher Kathleen A
38 Renz Rd
Mill Valley, CA 94941-1726

APN 016031050
Lanier Matthew D Tr
44 Carmel Ave
Pacifica, CA 94044

APN 016012170
Brown-Biela Karen
23 Carmel Ave
Pacifica, CA 94044-2550

APN 016031180
Blasquez Steven & Karen K
25 Santa Maria Ave
Pacifica, CA 94044-2502

APN 009281250
Espinoza Jesus Jr
260 Shoreview Ave
Pacifica, CA 94044-2231

APN 009284100
Obregon Gregory C Tr
275 Shoreview Avenue
Pacifica, CA 94044

APN 016011180
Eldredge Rodney G Tr
29 Paloma Avenue
Pacifica, CA 94044

APN 016021380
Toomey Joyce P Tr
306 Paloma Ave
Pacifica, CA 94044-2221

APN 016012320
Tripp Jason
32 Paloma Ave
Pacifica, CA 94044-3102

APN 009292070
Pacifica School District
375 Reina Del Mar Ave
Pacifica, CA 94044

APN 016012020
Dam Jeffrey N
4 Paloma Ave
Pacifica, CA 94044-2240

APN 016031160
Walter Kimberly M
47 Santa Maria Avenue
Pacifica, CA 94044

APN 016012260
Varga Sandra Veronica
6 Kendell Court
Pacifica, CA 94044

APN 016012070
Cunningham Sean N
70 Paloma Ave
Pacifica, CA 94044-6307

APN 016012150
Crain Randall Alan
75 Santa Rosa Ave
Pacifica, CA 94044

APN 016012310
Savage Gregory B Tr
813 Laurelwood Drive
San Mateo, CA 94403

APN 016031270
Stanley Catherine M
98 Carmel Ave
Pacifica, CA 94044-2548

APN 009281260
Smith Leon A
P.O. Box 2386
El Granada, CA 94018

APN 009284050
Hlousek Marcell Ruben Tr
Po Box 294
Pacifica, CA 94044

APN 016012240
Egan Stephen
Po Box 994
Belmont, CA 94002-0994

APN 016031070
Potter Don
62 Carmel Ave
Pacifica, CA 94044-2548

APN 009283090
Gatley Rick & Marie
701 Carmel Ave
Pacifica, CA 94044-2416

APN 016031020
Espinoza Brandon S
8 Carmel Ave
Pacifica, CA 94044

APN 016031280
Yoes Peter W Tr
903 Pilar Pl
Pacifica, CA 94044-2223

APN 009281230
Joyner Robert Craig
P O Box 14771
San Francisco, CA 94114

APN 009284030
Marshall Carl F Tr
Po Box 1090
Millbrae, CA 94030

APN 016031230
Mckay Nicole Jolene Tr
Po Box 4262
Clearlake, CA 95422

APN 016011100
Clark Steven M Tr
7 Paloma Avenue
Pacifica, CA 94044

APN 016031040
Catlos Katherine
715 Commercial St
San Francisco, CA 94108

APN 016012080
Conroy Jeanne Therese
80 Paloma Ave
Pacifica, CA 94044

APN 016012120
Brisbane Albert Terrence
935 Darien Wy
San Francisco, CA 94127

APN 016011190
Phoenix Capital Lxv
P O Box 7602
Menlo Park, CA 94026

APN 016022340
Benson Mark A Tr
Po Box 122
Burlingame, CA 94011-0122

APN 016012190
Qiu Min Tr
Po Box 4790
San Mateo, CA 94404

ROBERT J. LANZONE
JEAN B. SAVAREE
GREGORY J. RUBENS
CAMAS J. STEINMETZ
KAI RUESS
KIMBERLY L. CHU

CAMAS J. STEINMETZ, Ext. 225
Email: csteinmetz@adcl.com

AARONSON DICKERSON COHN & LANZONE
A PROFESSIONAL CORPORATION

1001 LAUREL STREET, SUITE A
SAN CARLOS, CALIFORNIA 94070
PHONE: 650-593-3117
FAX: 650-453-3911
www.adcl.com

MICHAEL AARONSON
(1910-1998)
KENNETH M. DICKERSON
(1926-2008)
MELVIN E. COHN
(1917-2014)

Of Counsel:
NELLIE ANCEL
JOAN A. BORGER

July 29, 2019

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Fax: (415) 904-5400

Via: Fax

RE: Attachment 3 to Filed Appeal of City of Pacifica City Council Approval of Development Entitlements for 1567 Beach Boulevard (CDP 395-18)

Dear Coastal Commissioners:

This law office represents GRG/PACIFIC VENTURES, LTD., a California limited partnership ("GRG/PACIFIC"), the owner of that certain real property commonly known as 77 Paloma Ave., Pacifica. My client's property sits directly behind the above referenced project site and contains a 71-unit residential apartment building (Seapointe Apartments) whose residents will be among those most affected by the proposed project. Please consider this letter in support of my client's appeal of the City Council's narrow 3-2 June 24, 2019 approval (on appeal of the Planning Commission's narrow 3-2 May 6, 2019 approval) of the Coastal Development Permit Local Permit no. 395-18 for the proposed development of a vacant beachfront 0.45 acres lot with seven (7) townhome units (CDP). Despite concerns expressed by Coastal Commission staff and by members of the public, including my client, the City of Pacifica and the applicants refused to condition or revise the project to bring it into conformity with the City's Local Coastal Land Use Plan Policies 23 and 26 and Local Coastal Implementation Plan Sections 9.4.4404(d)(5) and 9-4.4406(c)(1)&(2). As such, the project as approved by the City is inconsistent with the City's Local Coastal Program and should be denied.

A. SUMMARY OF LCP POLICIES VIOLATED

The City of Pacifica's Local Coastal Program (LCP) is comprised of two components: the City's 1980 Local Coastal Land Use Plan (LUP) which is currently in the process of being updated[1], and the Implementation Plan (IP) which consists of zoning ordinances, zoning district maps, and other legal instruments to implement the Land Use Plan. As further detailed in this letter, the project as approved by the City is inconsistent with two primary LUP polices: LUP Policy 23 and LUP Policy 26, as well as IP Sections 9.4.4404(d)(5) and 9-4.4406(c)(2) which implement LUP Policy 26.

LUP Policy 23 provides in pertinent part that "[n]ew development.... shall be located... where it will not have significant adverse effects, either individually or cumulatively, on coastal resources." Because as explained below, the project may require significant improvements to the existing seawall to protect the safety of the structures and its residents, it may have a significant adverse effect on coastal resources in violation of LUP Policy 23. Moreover, because the project was erroneously determined exempt from CEQA, there is no substantial evidence in the record supporting the conclusion that the project will not have a significant adverse effect on coastal resources.

As stated in Coastal Commission North Central Coast District Manager Jeannine Manna's letter to the City's Planning Director dated May 6, 2019, LUP Policy 26 "requires that new development minimize risks to life and property in areas of high geologic and flood hazards, assure stability and structural integrity, and in no way require the construction of protective devise. Similarly, [IP] Section 9-4.4406 prohibits the placement or erection of a shoreline protective device unless necessary to protect existing development and prohibits new development which requires seawalls as a mitigation measure, or which would eventually require seawalls for the safety of structures." As pointed out in Ms. Manna's letter, because the proposed project relies on the existing seawall as protection against wave over topping, and because this seawall has a life expectancy of just 40 remaining years, and because nowhere in the record is it established that the life expectancy of the seawall is equal to or longer than the

[1] As stated on the City's website, "[t]hreats to the public's health, safety, and welfare posed by both man-made and natural hazards must be accounted for by the LCLUP Update. To this end, it will need to include provisions for stabilizing or retreating from shoreline areas experiencing erosion, and for minimizing risks from earthquakes, tsunamis, and rising sea levels."

life expectancy of the project, the project may require additional shoreline protection in violation of LUP Policy 26.

B. PROCEDURAL CONSIDERATIONS

1. Timing and Eligibility

GRG/PACIFIC files this appeal on June 29, 2019 which is the 10th working day after the California Coastal Commission's July 15, 2019 receipt of the City of Pacifica's notice of final action on the subject CDP. As such, this appeal is timely filed. Note that the Coastal Commission did not receive notice of the local action until 21 calendar days after the local action taken on June 24, 2019. The City's failure to send notice of the local action by July 1, 2019 to the Coastal Commission was in violation of Coastal Act Section 30603(d) which requires that "a local government taking an action on a coastal development permit shall send notification of its final action to the commission by certified mail within seven calendar days from the date of taking the action."

Pursuant to the Coastal Act, GRG/PACIFIC, is an aggrieved person eligible to appeal the project's CDP approval to the Coastal Commission because GRG/PACIFIC in person or through representatives appeared at public hearings of the City of Pacifica in connection with the decision of the Planning Commission and the City Council to approve the CDP and, prior to such hearings, informed the City of the nature of their concerns (Coastal Act Section 30525[2].) This office submitted comments to the City of Pacifica by letter dated June 21, 2019 and GRG/PACIFIC representative Bob Rouse testified at the City Council hearing on June 24, 2019. Moreover, all local appeals were exhausted by another aggrieved and interested party's appeal of the Planning Commission's decision to the City Council.[3] Within one week of filing this appeal, GRG/PACIFIC will notify the numerous interested persons and the City of Pacifica, of this appeal. (14 Cal. Admin Code Section 13111(c).)

[2] Coastal Act citations are located in the California Public Resources Code.

[3] The Planning Commission's 3-2 approval was timely appealed by appellant Cheryl Henley. Note that as stated in the record, neither the Coastal Commission itself, nor GRG/PACIFIC received notice of Planning Commission hearing as required by the City's LCP IP Section 9-4.4304(g)(4); notice was not received until the project had already been appealed to the City Council and therefore given the notice violation, GRG/PACIFIC had no opportunity to appeal the Planning Commission decision on the project itself.

2. California Coastal Commission Jurisdiction

The proposed development approved by the City of Pacifica is located within the appealable jurisdictions of the Coastal Zone because it (1) is located within 300 feet of the inland extent of a beach and; (2) is also located within a sensitive coastal resource area. (Coastal Act 30603).

C. **STANDARD OF REVIEW**

Pursuant to Sections 30603 and 30625 of the Coastal Act, the appropriate standard of review for this appeal is whether a "substantial issue" exists with respect to whether the project approved by the City of Pacifica conforms to the standards set forth in the City of Pacifica's certified local coastal program (LCP) and the public access policies set forth in the Coastal Act. (Coastal Act Section 30603). In determining whether a proposed development is in conformity with the certified local coastal program (LCP), the Commission may consider aspects of the project other than those identified by GRG/PACIFIC in the appeal itself and ultimately may change conditions of the approval or deny the permit altogether.

While the term "substantial issue" is not defined in the Coastal Act, the Commission's regulations indicate that the Commission will hear an appeal unless it "finds that the appeal raises no significant question" (California Code of Regulations, Title 14, Section 13115(b)). In previous decisions on appeals, the Commission has been guided by the following factors in making such determinations: (1) degree of factual and legal support for the local government's decision that the development is consistent or inconsistent with the certified LCP and with the public access policies of the Coastal Act; (2) The extent and scope of the development as approved or denied by the local government; (3) The significance of the coastal resources affected by the decision; (4) The precedential value of the local government's decision for future interpretation of its LCP; and (5) Whether the appeal raises only local issues, or those of regional or statewide significance.

D. GROUNDS FOR APPEAL

1. The Project May Have a Significant Adverse Effect on Coastal Resources in Violation of LUP Policy 23

LUP Policy 23 provides in pertinent part that "[n]ew development.... shall be located... where it will not have significant adverse effects, either individually or cumulatively, on coastal resources." Because as explained further below in Section D-2, the project may require additional shoreline protection for the safety of the structures and its residents, it may have a significant adverse effect on coastal resources in violation of LUP Policy 23. Moreover, because the project was erroneously determined exempt from CEQA, its potential to result in significant adverse effects on coastal resources has not been properly analyzed and therefore substantial evidence in the record does not support the finding that the project is consistent with LUP Policy 23.

Section 13096(a) of the Commission's administrative regulations requires Commission approval of a Coastal Development Permit application to be accompanied by a finding, supported by substantial evidence, that the application, as conditioned by any conditions of approval, is consistent with the California Environmental Quality Act (CEQA).

The Planning Commission erroneously found the project exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15332 Class 32 Infill Development Projects categorical exemption. The Class 32 exemption is not applicable because the criteria for the Class 32 exemption are not satisfied and, further, one of the exceptions to this exemption applies.

The criteria for application of a Class 32 exemption are as follows:

> (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations;
>
> (b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses;
>
> (c) The project site has no value, as habitat for endangered, rare or threatened species;

(d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and

(e) The site can be adequately served by all required utilities and public services.

Because the project requires a variance from the otherwise required rear yard setback and allowable projections into the rear yard setback, the project does not meet subsection (a); it is not "consistent with the applicable ...zoning designation and regulations." The fact that the Zoning Ordinance allows an applicant to apply for a variance to deviate from these applicable zoning regulations does not, contrary to the conclusion in the staff report, make the project "consistent with the applicable ...zoning designation and regulations." Indeed, if this were the case, this criterion would be meaningless. Therefore, because the project requires a variance from the otherwise applicable zoning regulations, the project does not satisfy subsection (a) and therefore does not qualify for the Class 32 exemption.

Furthermore, the project falls within one of the exceptions set forth in CEQA Guidelines Section 15003.2 which disqualifies it from use of the Class 32 exemption: "(c) Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances." There is substantial evidence presented in the June 24 Council Packet – including by the California Coastal Commission - that the project's beachfront location is severely impacted by storm surges and wave overtopping and that these phenomena are likely only to increase with projected sea level rise. Indeed, the project site falls within an area at severe risk of sea level rise as designated by the City's draft LCP Adaptation Plan, which in turn was based on San Mateo County's Sea Level Rise Vulnerability Assessment.

This unusual circumstance could potentially require improvements to the existing seawall to protect the proposed structures and their residents which in turn could result in a significant environmental impact to a coastal resource in violation of LUP Policy 23. Because the City improperly relied on the Class 32 Infill Exemption exempting it from CEQA review. The project's potential to result in a significant adverse effect on coastal resources was never properly analyzed and therefore the Commission's failure to uphold this appeal would be in violation of Section 13096(a) of the Commission's administrative regulations.

2. LUP 26: The Project May Trigger Shoreline Protection and/or Risk Life and Property in Violation of LUP Policy 26

LUP Policy 26 states in pertinent part as follows:

> 26. New development shall:
>
> (a) Minimize risks to life and property· in areas of high geologic, flood and fire hazard.
>
> (b) Assure stability and structural integrity and neither create nor contribute significantly to erosion, geologic, instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

This policy is implemented by IP Sections 9.4.4404(d)(5) and 9-4.4406(c)(1)&(2) which state in pertinent part as follows:

> 9.4.4404(d)(5). Consistent with the City's Seismic Safety and Safety Element, new development shall be set back from the coastal bluffs an adequate distance to accommodate a 100-year event, whether caused by seismic, geotechnical or storm conditions, unless such a setback renders the site undevelopable. In such case, the setback may be reduced to the minimum extent necessary to permit economically viable development of the site, provided a qualified geologist determines that there would be no threat to public safety and health;
>
> 9-4.4406(c). *Development standards.* The following standards apply to all new development along the shoreline and on coastal bluffs.
>
> (1) Alteration of the shoreline, including diking, dredging, filling and placement or erection of a shoreline protection device, shall not be permitted unless the device has been designed to eliminate or mitigate adverse impacts on local shoreline sand supply and it is necessary to protect existing development or to serve coastal-dependent uses or public beaches in danger from erosion or unless, without such measures, the property at issue will be rendered undevelopable for any economically viable use;

> (2) Consistent with the City's Seismic Safety and Safety Element, new development which requires sea-walls as a mitigation measure or projects which would eventually require seawalls for the safety of the structures shall be prohibited, unless without such seawall the property will be rendered undevelopable for any economically viable use;

In summary, reading LUP Policy 26 (which adopts and incorporates Coastal Act Section 30253) and its IP policies together, shoreline protective devices are allowed only when necessary to protect *existing* development and when designed to avoid and minimize adverse impacts to coastal resources. However, they are not allowed if they are both unnecessary to protect existing development and inconsistent with LCP and/or Coastal Act policies to protect coastal resources, including natural shoreline processes, public access to and along the sea, and views. Further, *new* development may not rely on construction of shoreline protective devices to ensure the structure's stability. Instead, such stability must be ensured by setting new development back from the coastal bluffs an adequate distance to accommodate a 100-year event.

Coastal Act Section 30253 – which is adopted and incorporated by LUP Policy 26 -- requires that "new development...assure stability and structural integrity, and neither create nor contribute significantly to erosion...or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs." The Commission has long applied this policy to implement appropriate bluff-top and shoreline setbacks for new development. Such setbacks are based on an assessment of projected erosion and related hazards at the site for the life of the proposed development and help ensure that seawalls and other protective devices that could lead to adverse impacts would not be necessary in the future.

As documented in the record, the proposed project relies on the existing seawall fronting Beach Blvd. for its protection from coastal erosion, wave overtopping and 100-year flood events; consequently, the structural integrity of this project is tied to the ability of the Beach Blvd seawall to function for the life of the project. As explained in Northern Central Coast District Manager Jeannine Manna's May 6, 2019 letter, evidence in the record concludes that wave overtopping would extend about 40 feet from the top of this existing seawall and, relying on this conclusion, the Planning Commission staff report found that the project's proposed 68-foot setback from the seawall was adequate. However, as pointed out in Ms. Manna's letter, the staff report admits that the seawall has only "approximately 40 years of life remaining" and "the applicant has no control over whether the seawall shall remain or be removed because it is owned by the City of Pacifica."

Nowhere in the record is it established that the seawall would survive the expected life of the project. On the contrary, it is generally assumed that new structures have a design life of 100 years. See page C-33 of the LUP which states "...setbacks should be established to protect new structures from loss during their design life, generally assumed to be 100 years." As such, just 40 years into the 100-year life of the proposed project, it is highly likely that that replacement or other significant improvement to the existing seawall will be needed to protect the proposed project's structures and their residents, especially given factors such as the uncertainty regarding sea level rise due to global climate change and the frequency of current seasonal wave overtopping during storm events. Not only is such replacement or improvement inconsistent with LCP Policy 26, as acknowledged in the staff report, the applicant will have no control over such needed replacement or improvement because the seawall is owned and entirely controlled by the City.

Coastal Commission North Central Coast District Planner Patrick Foster in his letter dated March 13, 2019 requested that conditions of approval be imposed to address the project's inconsistency with LUP 26 and its IP policies, such as regular monitoring of the bluff and triggers for retreat following bluff erosions, relocation or removal of threatened structures when within a certain distance of the bluff edge, the prohibition on the construction of any additional future shoreline protection solely for the purpose of protecting the proposed project, and the requirement that secondary access be provided as part of the project to serve as the primary access to the project should Beach Blvd. become degraded to the point where it can no longer be utilized safely. Coastal Commission North Central Coast District Manager Jeannine Manna reiterated these requests in her May 6, 2019 letter.

City staff, however, entirely dismissed the concerns and suggested conditions of approval by both Coastal Commission staff members, arguing that LUP 26 and its implementing policies, were not applicable to the project: "Coastal Commission's assertion that the stated policies pertain to the subject project results from a misreading of their provisions... the Coastal Commission's attempt to apply the cited polices to the subject project is misguided based on the facts pertaining to the project, and left wanting of a policy adopted in the City's LCP which is on-point to circumstances where an existing seawall is present and such seawall is not controlled by the project proponent." (PC Staff Report p. 31, packet Pg. 261.)

In support of its dismissal, staff shortsightedly argued the very narrow interpretation that the LUP 26 does not apply to the project because the seawall already exists. The staff report fails to address the fact that the life of the seawall will not survive the life of the project and therefore

the project ultimately will require either replacement of the seawall or significant modification to seawall. Moreover, the staff report did not include any analysis of alternative methods to ensure stability of the project to avoid the reasonably forseeable future need for replacement of the seawall or other construction of a shoreline protection device.

Accordingly, the project as approved by the City, has not been designed to minimize risks to life and property and assure stability and structural integrity of the proposed structures in compliance with LUP Policy 26 and its IP policies. Therefore, the approved project is inconsistent with the policies and provisions of the certified LCP regarding shoreline development and hazards.

E. SUBSTANTIAL ISSUE FACTORS MET

All of the five factors to be considered in determining whether there is a substantial issue with regard to the project's consistency with the City of Pacifica's certified LCP are met and therefore a substantial issue should be found:

(1) Degree of factual and legal support for the local government's decision that the development is consistent or inconsistent with the certified LCP and with the public access policies of the Coastal Act;

As explained, above, the City has not provided an adequate analysis of whether the project is sited and designed appropriately to ensure geologic and engineering stability without the need for additional shoreline protective devices in the future to protect the project's proposed structures and its residents. Further, there were no conditions of approval imposed to require modifications to the design if necessary, to ensure geologic stability and avoiding shoreline protection devices. Moreover, the City failed to conduct the proper environmental analysis to determine whether the project would have an adverse effect on coastal resources. Therefore, the City has not provided a high degree of factual and legal support for the decision that the proposed development is consistent with the certified LCP policies related to hazards and shoreline development and impacts on coastal resources, as explained in detail above.

(2) The extent and scope of the development as approved or denied by the local government;

The proposed seven-unit condo project is proposed on the City of Pacifica coastline immediately adjacent to Beach Blvd. and its existing seawall. Therefore, the extent and scope

of the approved development has implications for future development projects along the City of Pacifica coastline both currently and into the future, as the project increases the amount of development exposed to shoreline hazards.

(3) The significance of the coastal resources affected by the decision;

The project is proposed on one of the last significant remaining vacant lots along the shoreline of the City of Pacifica and is entirely dependent on the existing seawall for protection which is estimated to last only 40 years, less than half the 100-year life of the project. As such, the project will likely require additional shoreline protection which could adversely affect the significant coastal resources of shoreline processes and sand supply, and public access within the vicinity of the project site.

(4) The precedential value of the local government's decision for future interpretation of its LCP; and

The precedential value of the City's approval for future interpretation of its LCP is significant because the existing seawall protects other properties in the City and therefore redevelopment or new development of these properties could raise similar resource issues. As detailed above, under the certified LCP, beachfront development is required to be sized, sited and designed to minimize risks from hazards and avoid the need for shoreline protection devices. If redevelopment of beachfront property (such as the subject project) is not required to be consistent with these LCP policies, cumulative impacts of development along the City of Pacifica coastline could result in an increased risk of hazards and degradation of coastal resources over time. As such, the City's action on the proposed development has precedential value for the City's future interpretation and implementation of its LCP.

(5) Whether the appeal raises only local issues, or those of regional or statewide significance.

The subject development raises issues associated with redevelopment on land subject to shoreline hazards, which hazards are expected to increase over time from sea level rise. These are important issues common to jurisdictions throughout the Coastal Zone and therefore this appeal has regional and statewide significance.

A. CONCLUSION

For all of the foregoing reasons, the proposed project is not in conformance with the certified LCP policies and provisions with respect to coastal hazards, shoreline protection, and impacts on coastal resources. As such, we respectfully urge the Commission to find that a substantial issue is raised with respect to the project's conformance with such LCP policies and provisions and, after making such finding, grant our appeal, denying the CDP for the proposed project.

Sincerely,

Camas J. Steinmetz

cc: Jeannine Mana, Northern Central Coast District Manager (via email)
Julia Koppmann Norton, Northern Central Coast District Coastal Planner (via email)
Christian Murdock, City of Pacifica Senior Planner (via email)
Tina Wehrmeister, City of Pacifica Planning Director (via email)
Sarah Coffey, City of Pacifica City Clerk (via email and US mail)

STATE OF CALIFORNIA -- THE RESOURCES AGENCY GAVIN NEWSOM, *Governor*

CALIFORNIA COASTAL COMMISSION
NORTH CENTRAL COAST DISTRICT OFFICE
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5260 FAX (415) 904-5400 TDD (415) 597-5885

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT

Please Review Attached Appeal Information Sheet Prior To Completing This Form.

SECTION I. Appellant(s)

Name: Nicholas Langhoff

Mailing Address: 1581 Beach Blvd. #3

City: Pacifica | Zip Code: 94044 | Phone: (415) 373-2154

SECTION II. Decision Being Appealed

1. Name of local/port government:

City of Pacifica

2. Brief description of development being appealed:

Construction of one four-unit, two-story building and one three-unit, three-story building containing a total of seven "town home" style condominium units on a 19,476 square foot (0.447 acre) vacant lot.

3. Development's location (street address, assessor's parcel no., cross street, etc.):

1567 Beach Boulevard, Pacifica, CA 94044, San Mateo County, APN 016-011-190

4. Description of decision being appealed (check one.):

RECEIVED
JUL 29 2019
CALIFORNIA
COASTAL COMMISSION
NORTH CENTRAL COAST

☑ Approval; no special conditions

☐ Approval with special conditions:

☐ Denial

Note: For jurisdictions with a total LCP, denial decisions by a local government cannot be appealed unless the development is a major energy or public works project. Denial decisions by port governments are not appealable.

TO BE COMPLETED BY COMMISSION:

APPEAL NO: A-2-PAC-19-0160

DATE FILED: 7/29/19

DISTRICT: North Central Coast

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 2)

5. Decision being appealed was made by (check one):

- ☐ Planning Director/Zoning Administrator
- ☑ City Council/Board of Supervisors
- ☐ Planning Commission
- ☐ Other

6. Date of local government's decision: 5/06/2019

7. Local government's file number (if any): 2018-006

SECTION III. Identification of Other Interested Persons

Give the names and addresses of the following parties. (Use additional paper as necessary.)

a. Name and mailing address of permit applicant:

Applicant:
Ciyavash Moazzami
23 Montecito Ave.
Pacifica, CA 94044

Owner:
Phoenix Capital LXV LLC
P.O. Box 7602
Menlo Park, CA 94026

b. Names and mailing addresses as available of those who testified (either verbally or in writing) at the city/county/port hearing(s). Include other parties which you know to be interested and should receive notice of this appeal.

(1) Cheryl Henley
15 Paloma Ave.
Pacifica, CA 94044

(2) Steven Clark
7 Paloma Ave.
Pacifica, CA 94044

(3) Nancy Merchant
77 Paloma Ave. #201
Pacifica, CA 94044

(4) Craig Joyner
244 Shoreview
Pacifica, CA 94044

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 3)

SECTION IV. Reasons Supporting This Appeal

PLEASE NOTE:

- Appeals of local government coastal permit decisions are limited by a variety of factors and requirements of the Coastal Act. Please review the appeal information sheet for assistance in completing this section.
- State briefly **your reasons for this appeal**. Include a summary description of Local Coastal Program, Land Use Plan, or Port Master Plan policies and requirements in which you believe the project is inconsistent and the reasons the decision warrants a new hearing. (Use additional paper as necessary.)
- This need not be a complete or exhaustive statement of your reasons of appeal; however, there must be sufficient discussion for staff to determine that the appeal is allowed by law. The appellant, subsequent to filing the appeal, may submit additional information to the staff and/or Commission to support the appeal request.

The proposed development at 1567 Beach Blvd is inconsistent with the existing 1980 Pacifica General Plan (GP) and LCP including: LCP Policy 26 (items a and b) on minimized risk to life and property without requiring the construction of protective devices; Net Developable Area and Design Life as defined in the GP; inadequate analysis and risk assessment of the project site; and inconsistent design character.

See attached appeal packet.

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 4)

SECTION V. Certification

The information and facts stated above are correct to the best of my/our knowledge.

Signature of Appellant(s) or Authorized Agent

Date: 7/26/2019

Note: If signed by agent, appellant(s) must also sign below.

Section VI. Agent Authorization

I/We hereby
authorize _____
to act as my/our representative and to bind me/us in all matters concerning this appeal.

Signature of Appellant(s)

Date: _____

SECTION III. Identification of Other Interested Persons (continued)

(5) Cindy Abbott
51 Salada Ave.
Pacifica, CA 94044

(6) Lauren Black
252 Shoreview Ave.
Pacifica, CA 94044

(7) Margaret Goodale & Stan Zeavin
1135 Palou Drive
Pacifica, CA 94044

(8) Paul Jones
1190 Manzanita Drive
Pacifica, CA 94044

(9) Sue Eldredge
29 Paloma Ave.
Pacifica, CA 94044

(10) Bryan O'Flynn
P.O. Box 470156
San Francisco, CA 94147

(11) Camas Steinmetz
Aaronson Dickerson Cohn & Lanzone
RE: SeaPointe Apartments
1001 Laurel St., Suite A
San Carlos, CA 94070

(12) Victor Carmichael
5005 Palmetto Ave.
Pacifica, CA 94044

(13) James Kremer
5 Eastlake Ave.
Pacifica, CA 94044

(14) Kim Schulz
1 Paloma Ave. #3
Pacifica, CA 94044

(15) Xana Cook
1 Paloma Ave. #2
Pacifica, CA 94044

(16) Cynthia Kaufman
252 Berendos Ave.
Pacifica, CA 94044

(17) Celeste Langille
40 Alviso Court
Pacifica, CA 94044

(18) Hal Bohner
115 Angelita Ave.
Pacifica, CA 94044

(19) Peter Loeb
411 Maitland Road
Pacifica, CA 94044

(20) Julie Lancelle
224 Modoc Place
Pacifica, CA 94044

July 26, 2019

California Coastal Commission
North Central Coast District Office
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

Subject: Appeal of Pacifica City Council Decision of June 24, 2019
CDP-395-18 at 1567 Beach Boulevard, Pacifica, CA (APN 016-011-190)
CCC ID# 2-PAC-19-1022

Dear Commission Staff:

We are writing today to express our strong opposition to the Pacifica City Council's decision on June 24, 2109, to approve the proposed development at 1567 Beach Blvd, Pacifica, CA (1567 Permit).

We believe the proposed development at 1567 Beach Blvd is inconsistent with the existing 1980 Pacifica General Plan (GP) and Local Coastal Plan (LCP) as detailed below in the sections on: 1) LCP Policy 26 (items a and b) on minimized risk to life and property without requiring the construction of protective devices; 2) Net Developable Area and Design Life as defined in the GP including an inadequate analysis and risk assessment of the project site; and 3) Inconsistent design character.

Furthermore, we contend that the studies included in the 1567 Permit that included any armoring should not be considered. We base this determination on the 1980 Local Coastal Plan (LCP) and Pacifica Hazard Policy in Pacifica's new draft LCP as well as on your own concerns as expressed in letters to the applicant on March 13, 2018 and May 6, 2019. Should the California Coastal Commission (CCC) choose to consider the project engineering studies, we contend that there are many inaccuracies to be evaluated as discussed below.

This appeal provides an analysis researched and compiled by us, local community members. We have decades of observational experience at this location. In short, we find there are serious technical and procedural inconsistencies with respect to Pacifica's LCP and GP, which represent substantial concerns for safety of life and property under the current proposal at this highly problematic coastal site. The issues are complex and interconnected.

1) Inconsistencies with the Existing 1980 LCP and Coastal Hazard Policy 26, Part (a) – Risk to Life and Property

Part (a) in policy 26 of the 1980 Pacifica LCP and Coastal Act Section 30253 (Minimization of adverse impacts) states:

> *"New development shall:*
>
> *(a)* ***Minimize risks to life and property*** *in areas of high geologic, flood and fire hazard."*

The project site is within an area of high flood hazard, adjacent to a velocity flood zone. The coastal hazards at this site have been seriously understated by the developer's engineers and City Planning Staff. Even without projecting future sea level rise, this location is already subject to wave overtopping, destructive wave run-up, flooding and other coastal hazards.

Singular Access / Emergency Access

The primary issue with this site is the structurally degenerating and dangerous singular site access via Beach Boulevard to the property. In your March 13, 2018 letter to the applicant, you asked the applicant to address this concern and stated:

> *"given that Beach Boulevard will serve as the only roadway to the proposed development, approval of the project should be conditioned to require the Applicant to provide alternative access to the residences in case Beach Boulevard becomes degraded to the point it can no longer be utilized safely."*

Beach Blvd is regularly pummeled with dangerous and destructive overtopping waves and high velocity wave runup that are a clear and present danger to future residents traveling in vehicles or on foot to and from their homes at this project site. These same waves also have the potential and capacity under current oceanic conditions (without considering future sea level rise (SLR), wave swell, and other weather amplification events) to destroy this section of the wall (as has already happened only 500 ft south of the property in 2016) thereby rendering this project site inaccessible.

Figure 1 – The property entryway: the only access to and from the property
(see Exhibit A: Martin/Skelly conversation regarding property access)

Furthermore, one of the units in Building 2 is proposed to be an Americans with Disabilities Act (ADA) compliant unit. A condition of approval *"would require the applicant to install a sidewalk along the east side of Beach Boulevard to provide a safe pedestrian path during periods of high surf when waves may overtop the seawall"* and would also require an ADA-compliant pedestrian crosswalk at the corner. Overtopping events as shown in figure 1 (frequent during storm season) rule out the option for a safe pedestrian path to access the property.

The applicant has not addressed your concerns for safety to potential residents by providing the alternative access requested in your letter of March 13, 2018. The Applicant did suggest alternate "emergency" access through a private driveway behind 1 Paloma and 1581 Beach Blvd. The Planning Department Staff Report states *"There is no legal method by which the applicant can obtain*

secondary access to the project site at this time." Furthermore, even if this access could be acquired, it is also routinely flooded during significant storm surges, rendering the two buildings "islands" according to one resident. Therefore, there is no viable alternative access for this site.

City of Pacifica's State of Emergency

Fierce storms in 2016 caused the seawall to catastrophically fail 500 feet south of the project site (see figure 2) and precipitated a State of Emergency proclamation.

Figure 2 – 2016 Wall failure: State of Emergency

The City Council declares each month that Pacifica is in a State of Emergency due, in large part, to the fact that the northern reinforced earth wall (RE wall) needs to be replaced. Current estimate for its replacement is $25 million. Yet the City is insisting that the 1567 Project is currently safe and doesn't need to address your concerns to evaluate the project without shore protection or for triggers for retreat. See Exhibit B.

Inadequate assessment of the Northwest corner of the property unprotected at the northern terminus of Beach Boulevard

The project is sited much closer (less than 50 feet away) to the exposed northwest edge of the property than to the RE wall to the west. All discussion of safety refers to the RE wall.

GeoSoils/Daedalus/Cotton, Shires, Associates examined only the existing retaining wall running north to south along the road. Neither they nor the City staff have assessed the northern terminus of Beach Boulevard where there is no RE wall protection. The lack of protection is due to the path that needs to be maintained to service the riprap revetment. Also, there is visible damage at the connection to the concrete facing for the storm drain outlet. The fact that there is no wall at the end of the street is not addressed in the Applicant's report or the City's staff report. We see this as a major oversight. The northwest corner of the property is fully exposed to wave runup and relies on

revetment maintained by property owners at 244 Shoreview Avenue and the City revetments protecting the storm drain. Figure 3 below illustrates the issue, the red arrow showing unimpeded access for wave runup (especially with SLR) right into the northwest corner of the proposed project site.

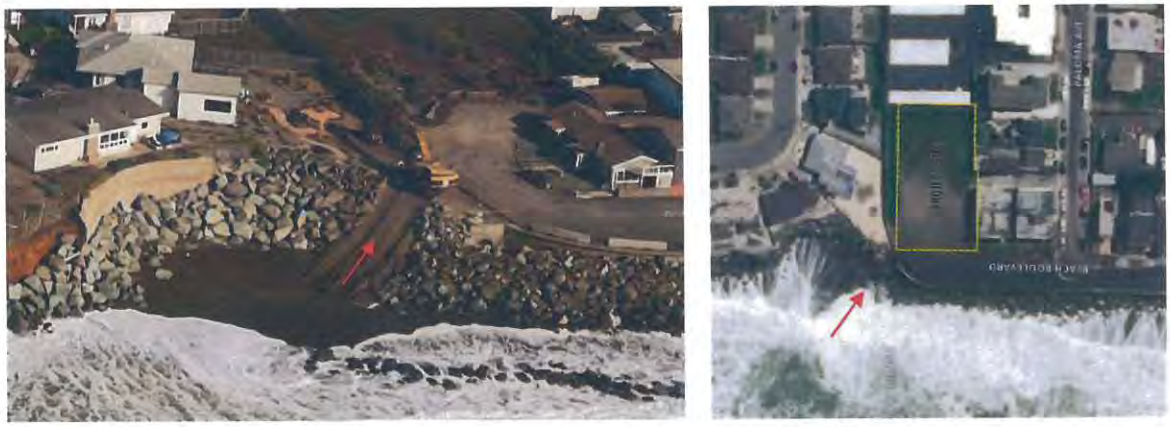


Figure 3 – Wave runup access at northern terminus of Beach Blvd

In the future the city will need to determine how to protect the storm drain running through the 1567 property. (See Exhibit C – Photos of Beach Blvd north end)

Risk from overtopping and runup is underestimated

In his response dated January 14, 2002 to CDP 2-01-026 to justify adding more rock for reconstruction of the Pacifica shore protection, Mr. Skelly of GeoSoils states:

> *"Based upon this analysis [the ACES design and analysis system] the height of the revetment for a no overtopping condition should be a minimum of +21 ft MSL. Based upon our experience and direct observation the Beach Blvd revetment and wall system is severely overtopped at elevations of about +21'. The wave driven water coming over the top of the wall is observed to be between 2 to 3 feet in height. This would dictate that the revetment/seawall system needs to be up to about +25' MSL in height. The top of the RE wall varies from about +21' MSL to about +29' MSL. By direct observation the RE wall, even at +29' MSL, is overtopped."*

This illustrates that models may not produce reliable real-world results. In this case, the ACES model underestimated overtopping by 8 feet. When consulting for the City, GSI recognizes the extent of the model's deficiency, but when consulting for applicants (GSI to LegacyQuest May 5, 2004), GSI states that *"the revetment/seawall system needs to be at least +25 feet MSL in height to provide full protection to Beach Boulevard and the site"*. See Exhibit D for other estimates of overtopping.

Furthermore, if overtopping was observed to be 8 feet higher than the model in 2002 (17 years ago), it is not surprising that observations today are far higher than current models predict and that overtopping will continue to be a formidable problem into the future. All of us who have lived near Beach Blvd have observed a noticeable increase in the frequency and intensity of overtopping events. What were once rare and spectacular weather events in 1998 now happen on just an

average winter day in 2019. This year we're even getting overtopping in June and July, splashing far inland from the edge of the RE wall. Weather amplification events even further aggravate overtopping. See Exhibit E.

The proposed development does not have adequate setback from the RE wall. The Staff report concludes that the front building at a distance of 68 feet set back won't be affected by overtopping. The adjacent buildings (1 Paloma Ave. & 1581 Beach Blvd) at the same distance have been forcefully hit (even above the second-floor windows), damaged and flooded. Figure 4 at the right (January 2017) shows complete demolition of what was a structurally sound wood fence in front of 1581 Beach Blvd 60 feet set back from the RE Wall. This wave impact and flooding event (directly south of the project site) destroyed structure and sent patio furniture a few hundred feet east around the building.

Figure 4 – Brute force wave destroys property at 1581 Beach Blvd

Neighborhood Experience

There is a body of testimony from many people who live in the area as to both the frequency and severity of dangerous and destructive overtopping and wave runup. These personal accounts already contradict the "future" 40-foot overtopping stated in reporting by GSI and City Staff. The routine experience of residents during winter storms is that waves cause damage much farther from the wall than the 40 feet claimed; indeed, destruction has occurred 60 feet from the wall directly south of the property (see figure 4 above) and at elevations even higher than the project site. Seeing garages reinforced with boards in the blocks immediately north of the pier where the wall is higher is an indication that residents' experience does not agree with engineering theory. See Exhibit F for individual accounts from residents with decades of observational experience that underscore substantial inaccuracies with the Applicant's consultant team and City Staff's models, predictions, and official statements.

Risk from failure of existing RE wall and Rock Revetment

The City's approval of this project does not acknowledge the deficiencies in the RE wall or the fact that its failure would compromise the safety of the approved project.

This site depends entirely on the RE wall for both access and protection. Just because the collapse in 2016 did not happen directly in front of this site does not mean that one can't. No improvements have been made to the RE wall or the revetment, the shoreline protection is now three years older,

and sea level rise continues to be a real threat. This would be the largest development ever built along northern Beach Blvd.

The RE wall has suffered two significant failures (2001 – just north of the pier, and 2016 – 500 feet south of the project site), and has developed multiple voids and sinkholes. Aggressive wave action can quickly remove the sand behind the RE wall. See Exhibit G.

For the 1567 Project, test pits were excavated and only visual inspections of the straps were performed by GeoSoils (GSI), Daedalus Structural Engineering and Cotton Shires (CSA). Daedalus qualified their conclusions:

> *"The actual structural characteristics of the existing wave wall could not be fully assessed since no calculations were performed. In addition, site terrain and armor protections conceal many features of the structure throughout."* (February 27, 2019)

GSI assesses the stability of the revetment for this project in the report of November 27, 2017 and states that:

> *"A comparison of aerial photographs available on the Coastal Records website shows little, if any, change in revetment geometry and the relative positions of the stones fronting the RE wall."*

However, the most recent photographs were taken on September 27, 2013 (over two years before the 2016 collapse) and may no longer accurately represent the revetment condition. (https://www.californiacoastline.org, Image 201306443). GSI has stated previously that damage to the revetment or movement of the stones may occur "as a result of extreme waves." (September 19, 2007 GSI to Pacifica, CDP 2-07-028).

Even with the narrow scope of the peer review by Daedalus and CSA, the remaining life of the RE wall was concluded to be 40 years, a significant decrease from GSI's claim of 75 years. Neither the 75-year estimate nor the 40-year estimate complies with the LCP requirement that new development should be safe for a design life of 100 years without new shoreline protective devices.

Furthermore, testimony elicited by Pacifica Planning Commissioner Clifford during the hearing of May 6, 2019 brought forth that the failures had not been caused by the straps, but rather the brute force of the waves. Ray Donguines, Associate Civil Engineer with the City of Pacifica, stated that brute force impact of waves *"pushed the tiles, creating a void, allowing the water to take away the material behind the wall, causing a domino effect and the RE wall to fail."* Additional reports of the 2016 failure attribute it to water under the wall footing.

Comparison of the 1567 Project site to 2212 Beach Blvd is inappropriate

GSI references and draws parallels between conditions at the current 1567 Project and the conditions identified at 2212 Beach Blvd in a study prepared for Pacifica by Moffatt and Nichol (M&N) in 2016 (http://pacificalibraryfoundation.com/Coastal-Hazards-Technical-Report-wES_ls.pdf). The two sites are simply not equivalent. Given that the RE wall is not a seawall and that GSI does not require beach nourishment, a 40-year additional life span for the RE wall is questionable.

GSI also echoes the M&N report conclusion that overtopping will be limited to 40' and uses it to justify the claim of 40-foot overtopping at the 1567 Project site. However, in January of 2019, City staff requested M&N to comment on development at 2105 Beach Boulevard (another property only slightly north of the 2212 Beach Blvd site). An email from M&N to the City (01/28/2019) states that:

> *"the wave overtopping of the seawall may be greater at the subject site [2105 BB] due to a narrower revetment and beach. The wave run up and overtopping are functions of beach width, beach elevation, seawall height, and distance from the shoreline. The beach fronting the 2105 site has a rock revetment and is narrower than the 2212 site, which implies that run up and overtopping will be different at both sites." (Attachment F, packet for 2105 Beach Blvd., page 106).*

The beach in front of 1567 Beach Blvd is substantially narrower than the beach in front of 2212 Beach Blvd. The photos in figure 5 below were taken less than a minute apart.

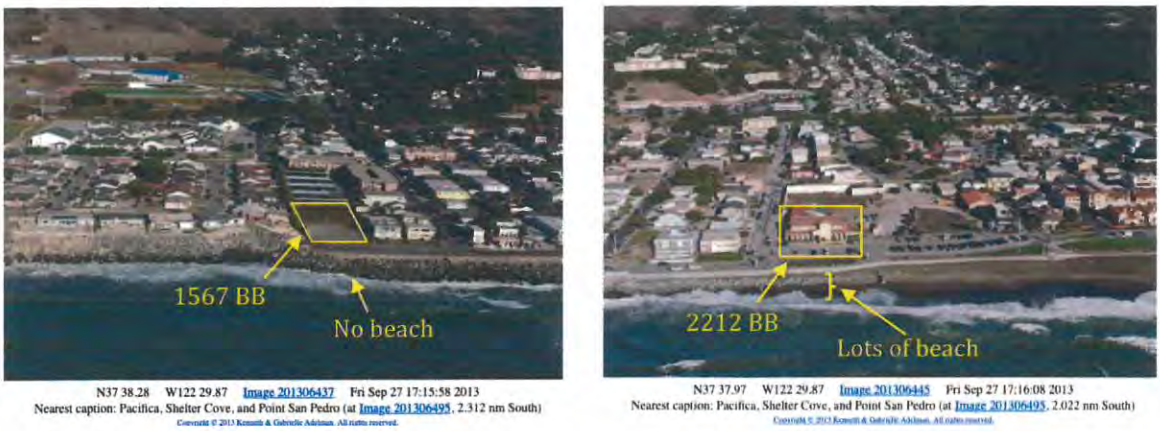


Figure 5 – Inequivalent coastal conditions at 1567 and 2212 Beach Blvd sites

The RE wall is not a seawall. Without beach nourishment flooding from overtopping will be significantly different. The M&N conclusions for 2212 Beach Blvd are not applicable to 1567 Beach Blvd. See Exhibit H for details and reference.

2) Inconsistencies with the Existing 1980 LCP and Coastal Hazard Policy 26, Part (b) – Protective Shoreline Devices

Part (b) in Policy 26 of the 1980 Pacifica LCP and Coastal Act Section 30253 (Minimization of adverse impacts) states:

> *(b) Assure stability and structural integrity and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs."*

The need for a new wall for the maintenance of the 1567 Project is implied by the City's State of Emergency (see State of Emergency section above). GSI/Daedalus/CSA cannot guarantee the RE

wall will last any longer than 40 years, which would necessitate the construction of a new wall if the area were to be protected beyond that timeframe. Construction of a new wall is assumed, but not guaranteed. The protection of this project depends on the construction of a new seawall, or at the very minimum, protection of the northern terminus of Beach Blvd where the ramp must remain for City access to service the riprap revetment.

The Life of the RE Wall vs. the Life of the Project

The City's peer review of the applicant's engineering work claims the RE wall will last 40 more years. However, the life of the development is estimated at 75 years (not the 100 years specified in the 1980 LCP). Even if the wall lasts 40 years, the theoretical life of the development extends for another 35 years with no wall protection. Without the wall, the rate of erosion will increase and threaten the property. GSI considers only three feet of sea level rise. Couple that with the fact that there is very little protection on the northwest corner of the property, we believe a 75-year life span for this project cannot be assumed. Approval of the 1567 Project hinges on a single finding by GSI that the RE wall will last 40 years; however, the fact is, a brute force wave could substantially damage that wall during a large storm in the near future.

After serious breaches of the wall in 2016, the City began been seeking funding, now aiming for $25 million in 2023, to repair/rebuild the structure in acknowledgement that the present wall does not actually serve as a seawall. The new, improved seawall does not yet exist and there is currently no grant to build a new wall. Any new coastal development must not assume that the City will repair or rebuild the seawall. Pacifica's General Plan Policy 4 says new development shall:

> *"Prohibit seawalls which are necessary as a mitigation measure for new development. Projects should not be approved which eventually will need seawalls for the safety of the structures and residents."*

Policy 4 is consistent with the 1980 City LCP Policy 26, Policy 16, IP Zoning Code Section 9-4.4406, and the Coastal Act. Currently pending Hazard Policy 45 similarly requires *"new development to be safely setback from coastal hazards for 100 years and does not allow for shoreline structures as mitigation."*

Prior Project Denial

In 2017, City Planning and City Council denied a prior project on this site. A primary concern was "Changes in Beach Boulevard Seawall Conditions." See Exhibit I for an account of the March 20, 2017 Planning Commission Staff Report.

City Staff's statements call into question all of GSI's contentions from 2004 to 2017 (for the prior project) and for 2017 to date (for this project) regarding overtopping and integrity of the RE wall. However, the current City Staff reports are in complete contradiction to the City's own concerns in 2017, even though the status of the seawall has not improved and the remaining life has been downgraded from 75 years to 40 years.

City Staff also concluded in 2017 that the Moffatt and Nichol report could not be applied to the 1567 Project site because GSI did not address the differences between the north and south portions of the seawall.

3) Design Character and Parking

This project is inconsistent with the 1980 LCP and General Plan regarding the character of the West Sharp Park neighborhood and community scale, parking, beach parking and traffic circulation. See Exhibit J.

Summary

We believe the Applicant has failed to meet the requirements of the LCP section on the Risk to Life and Property, the LCP section on Protective Shoreline Devices section, and has put forth a project not in keeping with the character of the West Sharp Park district. In closing, Dr. James Kremer, Ph.D. in Coastal Oceanography, states in his letter opposing the project that 1567 Beach Blvd *"is arguably the most problematic developable coastal site in Pacifica now, charged with difficult environmental issues. Prudence demands due consideration of site hazards, and not for a minimal Sea Level Rise (SLR) estimate but for a severe one. Plan for the worst, hope for the best."* We, the appellant group, couldn't agree more.

Respectfully,

Nicholas Langhoff

1581 Beach Blvd. #3
Pacifica, CA 94044
phone: (415) 373-2154
email: langhoffn@smccd.edu

Cc:
Ciyavash Moazzami
Phoenix Capital LXV LLC
City of Pacifica

Attachments

1. Exhibit A – Martin/Skelly conversation
2. Exhibit B – Pacifica ongoing Emergency Proclamation
3. Exhibit C – Photos of the north end of Beach Boulevard
4. Exhibit D – Changing estimates of overtopping
5. Exhibit E – Weather amplification of coastal storm damage
6. Exhibit F – Personal accounts/media reports/statements on the record
7. Exhibit G – Reports of wall failure due to undermining
8. Exhibit H – Details of inconsistencies with Moffatt & Nichol (M&N)
9. Exhibit I – Prior project denial
10. Exhibit J – Neighborhood character, parking, beach parking and traffic circulation

Exhibit A – Martin/Skelly Conversation

In the following exchange with Council member Deidre Martin at the Appeal hearing on June 24, 2019, Mr. Skelly made it sound as if damage from flood waters or road blockage would be only for short durations of time:

"Martin: So how will they access their driveways when the road is closed?

Skelly: So you have to understand that your period of overtopping only coincides with the high tide and the high waves; when the tide goes back down you can …

Martin: So they won't be able to access it?

Skelly: Not for that short period if that occurs.

Martin: Those are for days at a time. I lived there for 4 years. So for days at a time these folks are going to have to dodge those waves just to walk into their homes?

Skelly: They don't occur all the time over that time period.

Martin: At least once a year for 4 to 5 days, that's just a minimum.

Skelly: But the tide goes up and down

Martin: I know this because this is my route home for 4 years.

Skelly: OK

Martin: So they're going to have to park out here and then walk in, is that correct? Walking past those waves?

Skelly: I don't plan access, I'm just the overtopping guy

Martin: OK, so we don't know how they're going to access it, do we Ciya? [inaudible]

Martin: No

Skelly: You could probably drive a fire truck in a foot or two of flowing water if it was an emergency, but you need your Fire guy to tell you. But I think they're designed to take that kind of flow. And what we calculated and what you see is less than that flowing over. And it's not just me, it's your own consultant ESA who produced the documents that you did your resiliency plan on. And then there's the CoSMoS from USGS. Both of those are relatively conservative and they know nothing about this project.

Martin: The main concern and the mission of the Appellant was to protect people's lives, so my question is (and maybe somebody else can answer), how will those folks access their doors, then.

Skelly: How do people access their homes along there now?

Exhibit A – Martin/Skelly Conversation

Martin: So they will walk into that weather, through those waves to get to their home?

Skelly: The water comes in a pulse; it's not continuous; wave overtopping is not like a river flowing.

Martin: The answer is "yes"?

Skelly: If that's what you're telling me to say, yes.

Martin: I guess I'm just assuming that."

Exhibit B – Pacifica Ongoing Emergency Proclamation

(See second to last paragraph for recent additions after 2016 Beach Boulevard RE Wall failure)

4

CITY OF PACIFICA
COUNCIL AGENDA SUMMARY REPORT

5/13/2019

SUBJECT:

Proclamation Confirming Existence of Local Emergency of the Pacifica Coastline from Westline Drive to the End of Beach Boulevard.

RECOMMENDED ACTION:

Accept current photos as of April 25, 2019 and move to continue proclamation confirming the existence of a local emergency of the Pacifica Coastline from Westline Drive to the end of Beach Boulevard.

STAFF CONTACT:

Sarah Coffey, City Clerk
coffeys@ci.pacifica.ca.us
650-738-7307

BACKGROUND/DISCUSSION:

On January 22, 2016 the Director of Emergency Services proclaimed the existence of a local emergency along the Pacifica coastline from Westline Drive to the end of Beach Boulevard due to El Nino storm activity.

Extreme wave heights for extended periods of time caused top-of-bluff retreat at several locations along the Pacifica coast and damage to City infrastructure as described below:

- failure of the sea wall and promenade on Beach Blvd. near Santa Maria Ave.;
- damage to a section of the concrete railing along the City pier;
- the undermining of a seven foot diameter storm drain outfall and concrete headwall for the discharge of Milagra Creek drainage to the ocean.

The City Council ratified this proclamation at its January 25, 2016, regular meeting.

Since that date, additional damage had occurred including an additional ground subsidence (sinkhole) of the Beach Blvd. Promenade near Paloma Ave., and additional sea wall breaches along Beach Boulevard at Salada Avenue and Beach Boulevard at Santa Rosa Avenue.

Council is asked to continue the proclamation until the emergency is concluded as part of the State grant requirements. Current photos are included as Attachment A.

FISCAL IMPACT:
None.

ORIGINATED BY:

City Clerk

Exhibit C – Photos of north end of Beach Boulevard

Since January riprap has been added obscuring ramp and path.

Exhibit C – Photos of north end of Beach Boulevard

By approving this NEW development at this site do the City and the citizens of Pacifica accept liability to create and extend a seawall to replace the existing retaining wall? To protect the property and development, consideration must be given to the existing storm drain and revetments.

NO seawall exists at the end of Beach Boulevard. Concrete extending north from the RE wall is the facing for the storm drain outlet.

2019Jan04_2483

The road ends and a walker can follow sand and dirt through the rock revetment to the beach.

2019Jan04_2485

Exhibit C – Photos of north end of Beach Boulevard

Separated from Shoreview properties to the north by a storm drain hidden by revetment in photo foreground. Most of visible revetment is privately maintained.

Seawall is nonexistent. At the end of the road damaged storm drain retaining wall abuts RE wall to south.
photo 2019Jan04_2486

Exhibit D – Changing estimates of overtopping

In the January 14, 2002 response to CDP 2-01-026 (reconstruction of the Pacifica shore protection), Mr. Skelly of GeoSoils states:

> *"Based upon this analysis [the ACES design and analysis system] the height of the revetment for a no overtopping condition should be a minimum of +21 ft MSL. Based upon our experience and direct observation the Beach Blvd revetment and wall system is severely overtopped at elevations of about +21'. The wave driven water coming over the top of the wall is observed to be between 2 to 3 feet in height. This would dictate that the revetment/seawall system needs to be up to about +25' MSL in height. The top of the RE wall varies from about +21' MSL to about +29' MSL. By direct observation the RE wall, even at +29' MSL, is overtopped."*

In the October 16, 2006 Planning Commission Staff Report (9 Condominiums) 1567 Beach Boulevard

> Seawall
> *A coastal hazard study for the subject site was also performed by Skelly Engineering in May 2004. According to Skelly Engineering, the Beach Boulevard revetment and wall system is severely overtopped at elevations of about +23 feet MSL. The overtopping occurs on average a few times per year. The wave driven water coming over the top of the wall is observed to be between 1 to +2 feet in height. This would dictate that the revetment/seawall system needs to be at least +25 feet MSL in height to provide full protection to.... the site.*

In the November 27, 2017 document for this project, page 7, GSI calculates

> *"For SLR of 3 feet, with an overtopping rate of 1.18 ft^3/s-ft at the crest of the seawall, the bore height is ~0.5 feet."*

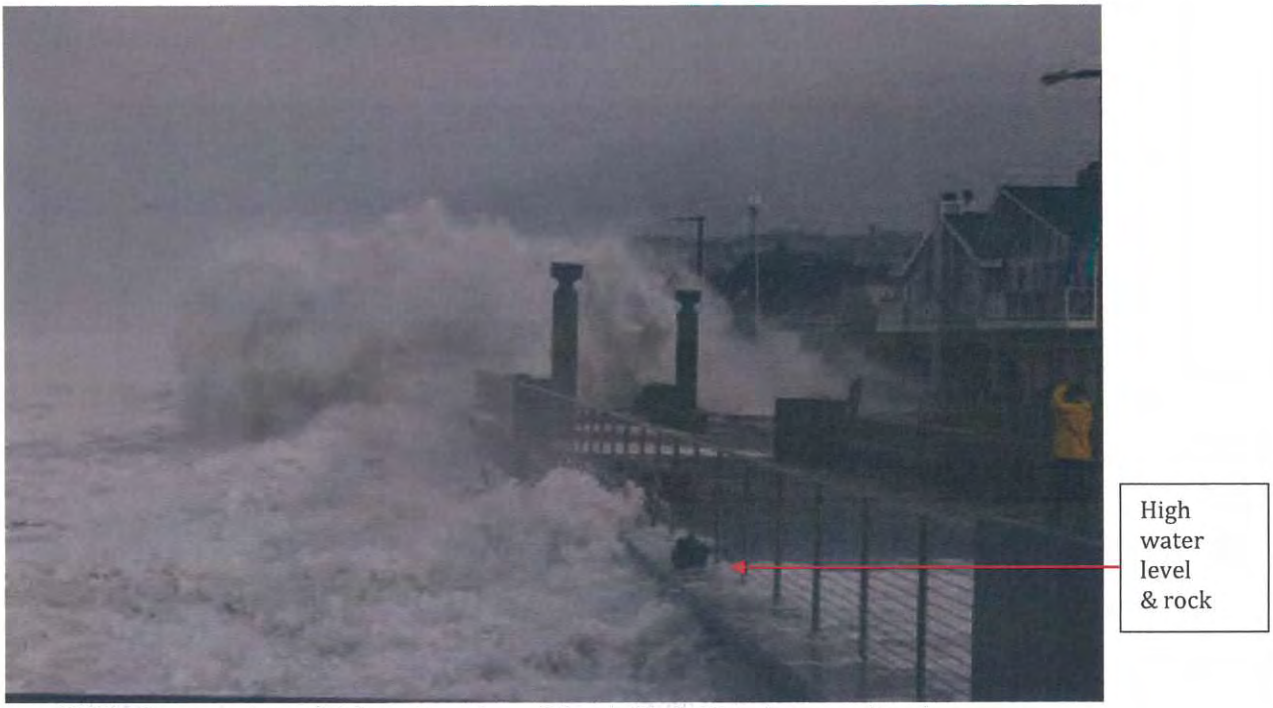
In the current project analysis, GSI uses the Moffatt & Nichol (M&N) wall height of 25'NAVD88 and the M&N figure of 40 feet of runup. GSI claims the 25'NAVD88 height is adequate to protect the site for 3' of sea level rise.

	Maximum Stated Overtopping Elevation	**Height of Wave-Driven Water Over Top of Wall**
2002 (for City of Pacifica)	+29' MSL	2 to 3 feet
2004 (for Legacy Quest)	+23' MSL	1 to 2 feet

We question the discrepancy between overtopping in 2002 and 2004 and the current GSI estimate of existing wall adequacy at 25' NAVD for the foreseeable future.

Exhibit D – Changing estimates of overtopping

Below is a photo showing SLR conditions, taken over a decade ago



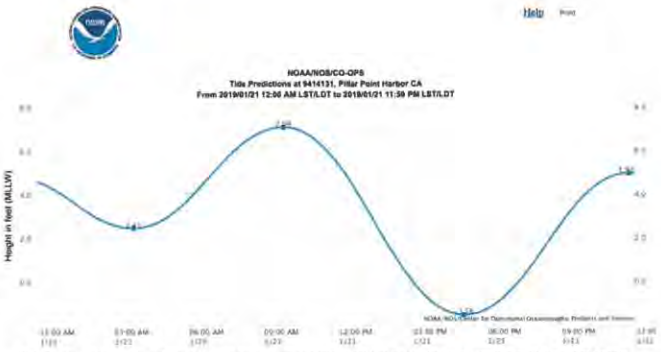
Jan. 2008: Overtopping at higher elevation of Beach Blvd. Note how perilously high the surface water is, and the large rock that was tossed up. (Source: Riptide)

Exhibit E – Weather Amplification of Coastal Storm Damage

At the Appeal hearing on June 24, 2019, the applicant's representative, Mr. Skelly of GeoSoils, Inc. said the following (based on our transcription of the recorded hearing):

> *"The tides are predicted out for many, many decades and surf is predicted about 10 days to two weeks out based on low pressure systems. One of the interesting things is that when the wave overtops the rocks and hits the wall, it splashes up. It makes a very dramatic picture. One of the things that you will note in the Appellant's pictures is that there are people standing there. There's people standing there, and the waves are over their head, but that's just spray and splash. In my response you will see that after that splash comes down, there's literally six inches, less than a foot of water flowing. As the Appellant pointed out, that can knock you off your feet, but it doesn't damage the block walls. It can lead to minor flooding of at-grade, like your garage, but all that is acceptable under FEMA. Our project is higher than the pictures that she showed and we do have that low-height wall."*

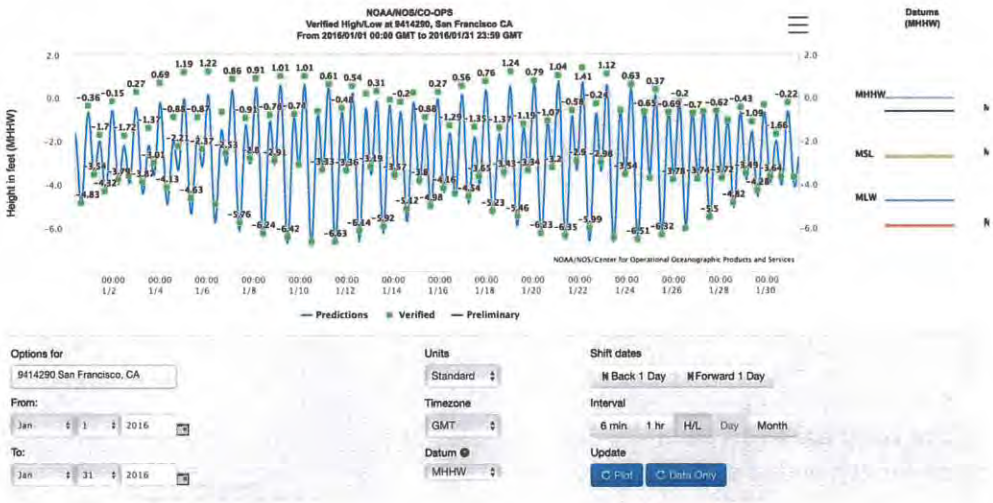
This statement is, at best, misleading. Tides are predicted by NOAA's National Ocean Service and the National Weather Service is able to make reasonable predictions of ocean conditions in a week to 10-day period. Because the latter are weather dependent, predictions beyond that are highly speculative. However, Mr. Skelly's attempt to trivialize the forces that can be generated from waves breaking over a seawall or the duration of hardship that can be endured from such events is very misleading.



Tides along our coast are of the semi-diurnal mixed variety, and as such there are two highs and two lows daily. Because the tides rise and fall in a sinusoidal wave, the amount of time that the tidal waters are at or near the daily maximum (high water) is not abrupt. By the rule of 1/12ths, approximately 1/12th of the total tidal amplitude changes in the first and last hour of any given tide cycle. That means, for example, that 1/6 of the tidal height will change in a two-hour period straddling the time of high tide, which is not very much change. On our coast for average tide heights, it would amount to about one foot total. If the highest high tide for the day is 6 feet, then for two hours, the waters will "hang" at about 0.5 above and below the high-water mark. That represents a lot of time for wave damage to occur, given that wave periods on the coast can be from 5 to 10 seconds (or 6-12 waves per minute). In large storms, wave frequency gets larger, but there remain plenty of large waves in an hour even at a frequency of one wave every 15 seconds (>200/hr) to do lots of damage and inundate an area for a long period of time. The graph above shows how this 7.04' tide last January 21, 2019, remained high for at least an hour either side of the

peak at around 10:00. This shows a two-hour window during which the ocean can overtop the seawall, cause erosion, or damage buildings.

Predicted tidal elevations are already sufficiently large at the time of regular spring tides, but they are even larger at perigean spring tides (king tides). For the applicant's professional consultant to reduce the complex issues of daily, monthly, seasonal, and El Niño effects on tides is perplexing. In this two-month period of 2016, for example, the graph below shows that the actual tide heights (green dots) are regularly exceeding the predicted levels. These data tend to support our anecdotal evidence of frequent overtopping at Beach Boulevard and, generally, our collective observation of significant amounts of coastal erosion and damage that have happened in the past three decades.



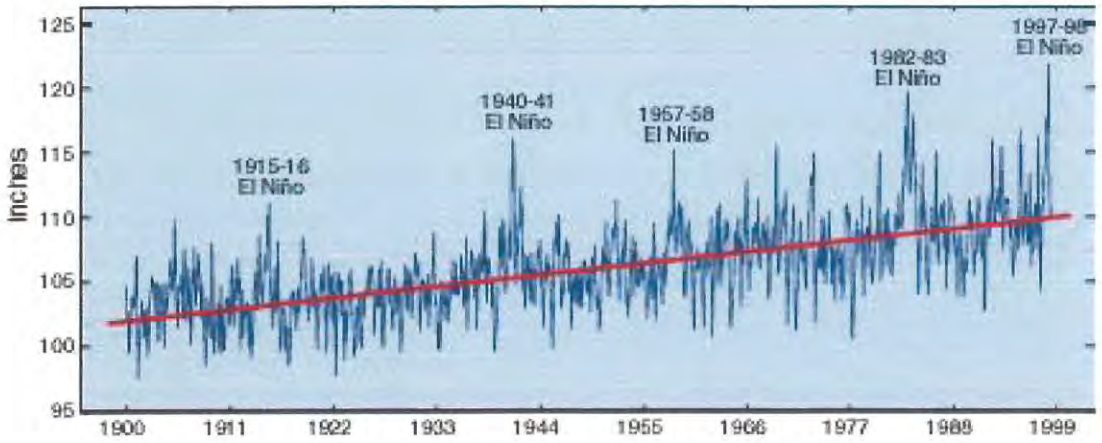
In the exchange with Mayor pro Tem Martin at the Appeal hearing, Mr. Skelly made it sound as if damage from flood waters or road blockage would be only for short durations of time (see Exhibit A – Martin/Skelly Conversation).

Based on this exchange, the Applicant's expert appears to have ignored the synergistic and stochastic effects of multiple weather phenomena working to produce damaging ocean conditions. The El Niño of 1997-1998 caused mean sea levels in the SF Bay region to be approximately 9" greater than predicted for a period of 3 months. That amounts to a tremendous volume of water capable of damaging the coast (as happened at Sharp Park Golf Course). If a large storm develops during an El Niño season and wind-driven waves stack up on top of large waves (as significant wave height can jump up quickly in storm-force winds) and if rains and runoff soften the surface and subsoil layers, any low-lying coastal location such as at 1567 Beach Boulevard can become very vulnerable to damage. We believe the City and the Applicant have overlooked this effect. Think of what happened with Hurricane Katrina - it was a "trifecta" of wind, waves, and high river flows that caused that catastrophe. While I am not equating this site to New Orleans, there are parallels that apply in terms of ocean and tidal processes.

Exhibit E – Weather Amplification of Coastal Storm Damage

Our concerns are further highlighted in an online Fact Sheet from the US Geological Survey (U.S. Geological Survey Fact Sheet 175-99 Online Version 1.0; https://pubs.usgs.gov/fs/1999/fs175-99/) in which it shows the following graph and text:

FORT POINT SEA-LEVEL RECORD



Sea-level measurements collected at Fort Point in San Francisco since before 1900 form the longest continuous sea-level record for any site on the west coast of North America. This record was recently analyzed by U.S. Geological Survey scientists, who found that four major factors influence sea level at Fort Point—daily tides, annual sea-level cycles, a long-term trend of slowly rising sea level (red line), and the occurrence of atmospheric events such as El Niños and La Niñas.

During the winter of 1997—98, wind-driven waves and abnormally high sea levels significantly contributed to hundreds of millions of dollars in flood and storm damage in the San Francisco Bay region. Recent analyses by U.S. Geological Survey (USGS) scientists of nearly 100 years of sea-level records collected near the Golden Gate Bridge found that these abnormally high sea levels were the direct result of that year's El Niño atmospheric phenomenon. The USGS continues to investigate the causes of such sea-level changes in order to better protect coastal communities from their effects.

In summary, we find that the Applicant team provided misleading and, at times, simplistic explanations for complex coastal processes that are coming to bear on the whole of Pacifica's coastline - and this section of Beach Boulevard in particular.

Exhibit F – Personal accounts/media reports/statements on the record

PERSONAL ACCOUNTS

Terri Jackson, 1 Paloma Ave.

I was injured as a result of the waves from a storm in January 2016. I was slammed up against the apartment building by a wave while trying to collect debris from a previous wave that hit the building. Basically, a wave came in, ripped out my fence and picked me up (along with all of my backyard furnishings) and slammed me into the building, pinning me up against the wall. My foot was bruised pretty badly from all the furnishings that piled up on it. I had to rip my legs out of the pile to get free so I could run from the next incoming wave. Had I not gotten free, I would have been seriously injured.

The windows on my apartment, facing the ocean, had to be boarded up because the waves were hitting the building/windows horizontally, and with such force, that we thought they would shatter.

Nancy Merchant, 77 Paloma Ave.

I moved to the West Sharp Park neighborhood in 1990. My husband routinely ran along the beach underneath the pier and all the way north to the Land's End Apartments (now OceanAire Apartments) except at the highest tides, when he couldn't get around the point at the cove. I don't recall when that stopped being possible, but it has become a rare sight to see any beach north of the pier in quite some time.

We moved to another neighborhood in Pacifica for several years and returned to West Sharp Park in 1998, in time to witness significant overtopping along Beach Blvd. from an El Niño event. Within a few years, overtopping in the winter became a norm. In 2002 (as documented in an article by Julia Scott for the Bay Area News Group), I was caught by surprise by a huge rogue wave. I ran into the street (I would like to believe that I was aware that no traffic was coming) and braced myself as the water crashed over my head. I was soaked to the skin from head to toe, except for one spot about the size of a dime underneath where I crossed my arms over my fleece-lined jacket.

While I wasn't hurt, and I laughed good-naturedly, it is not an experience I want to repeat. Thus, I avoid walking along Beach Blvd. during significant overtopping events, even though I enjoy watching the display. Nonetheless, I have had two narrow misses when after 10 or more minutes of minimal overtopping, a sneaker wave ramped up and dumped a big load onto the east sidewalk. I was lucky to be at a side street or a long driveway. And one day the run-up from low overtopping rushed across the street and soaked me up to my knees because I had nowhere to run inland.

Overtopping has become much more frequent and intense in the past 20 years. The term "king tides" has become a regular part of our lexicon, and is a signal for spectators from around the Bay Area to come watch the impressive overtopping. This year we are getting overtopping in June and July, with splashes of water reaching the street.

A few days after Pacifica had declared a State of Emergency in 2016, I wanted to take a look at the damaged section of the seawall. I was only able to get 2.5 buildings away from Beach Blvd. because the east-west side streets were flooded well inland from the seawall. The waves were overtopping

Beach Blvd. with every swell. The overtopping was actually more horizontal than vertical, but the water level was so high that the waves were consistently landing in the yards of the houses. Even though it was a partly sunny morning with no wind, my hair and face were wet and salt-encrusted within a half hour. News helicopters were beating the sky overhead, alternating between the damaged seawall and the endangered homes on the bluffs to the north. It was a terrifying vision of the future with sea level rise.

I enjoy watching the awesome beauty of nature, but the destructive consequences are sobering.

Cheryl Henley, 15 Paloma Ave.

I both hear and feel the waves overtopping from my own home. In recent years, I have experienced the ferocity and hazard caused by the waves overtopping first hand, first by being nearly knocked off my bicycle by a wave overtopping the RE wall as I briefly stopped at the railing at the end of Paloma Ave. and the second time, I was hit by a sneaker wave on the east sidewalk of Beach Blvd. (not far from the proposed site) and swept off my feet and completely submerged underwater. I was caught by this wave against the cement barrier shown in the photo below. When I got up, my shoes and clothes were completely full of sand.

The closure of Beach Blvd is a given at various times during the winter. I would not think of venturing to the north on the proposed extension of Beach Blvd. during the times when the road is closed due to the extremely dangerous conditions. I was witness to the resulting destruction caused by wave overtopping that crashed into the dwelling at 1 Paloma Ave a few years ago. The impact of the waves overtopping the RE wall demolished the front yard, pinned our neighbor against her house and sea water entered her home. A resident's car parked on Paloma Ave. adjacent to 1 Paloma was lifted from the sheet flow of water resulting from overtopping in 2016 and crashed into a nearby vehicle.

Exhibit F – Personal accounts/media reports/statements on the record

Paul Jones, 1190 Manzanita Drive

I moved to Shelter Cove in Pacifica in January 1980. Since that time, I have witnessed both a gradual change in the coastal environment and several extreme weather events. In January 1983, in the midst of a strong El Niño season, a nearly cataclysmic storm caused heavy damage to the structures in Shelter Cove. The storm washed away the road, damaged buildings, and permanently stranded my smaller vehicle in the Cove. In that same El Niño season, I watched waves wash over the dunes at Linda Mar State Beach and flooding the homes and shopping center in the district. In the 1997-1998 El Niño season, the Sharp Park Golf Course was inundated, causing the City of San Francisco to hastily construct a levee/berm along the entire length of its property. This structure continues to be damaged by large waves, primarily in the winter.

In the Rockaway Beach district, both Nick's restaurant and the Moonraker restaurant (but primarily the latter) have been getting pounded by large waves breaking over the seawall. Windows have been blown out.

As well documented by others, the Beach Boulevard area has been subjected to heavy damage, causing sink holes and frequent road closures. For 10 years, I lived in East Sharp Park and walked almost daily to the Ocean. Rarely in the 1980's and 1990's did waves wash up and over the seawall onto the sidewalk; nowadays, it is a regular event.

We have, as a community, witnessed an entire row of houses on Esplanade Drive wash into the Ocean. An apartment building suffered the same fate. Much like the adage "death by a thousand nicks," Pacifica's shoreline is suffering damage by a steady encroachment of the Pacific Ocean. Much in the same way that scientists are documenting "estuarine transgression" in the San Francisco Bay and Delta, we are feeling the same pressures here as the Ocean presses ineluctably landward.

Craig Joyner, 244 Shoreview

I live directly North of the proposed development and I have personally seen waves break well up onto the vacant property, as well as onto my lot and the property just north of me. Waves have broken onto the ROOF of the two houses north of me, 236 and 220 Shoreview, in the past.

In January 2017, waves on my property (which is 3 or 4 feet higher than 1567 Beach Blvd) destroyed the fence between 244 and 236 Shoreview, causing significant damage to 236 Shoreview and, to a lesser degree, 244 Shoreview. (Photos of this damage follow):

Fence from 2675 Beach

Fence from 244 Shoreview

To show elevational difference between the two lots.

My direct observational experience while living at 244 Shoreview Avenue is that this portion of the coast is highly susceptible to significant damage from annual winter storms and king tides. In the unlikely event of a tsunami, all bets are off for this area of the coast. And, with just modest sea level rise, the dangers will be magnified.

My home, like most in the area, was built in the 1950s when the shoreline was farther out than now. A neighbor says he has a photo of Beach Blvd running behind my house, between my yard and the ocean. I don't know when that road was abandoned to the sea, but it's a cautionary tale about the long term prospects of living here. My investment has been made, so my decision process is complicated. Many days, there's no place I'd rather be than enjoying the ocean and sunsets from my deck. Other times, I can't sleep due to the noise and house shaking caused by storms and waves. I understood intellectually the risk of living here, but had I actually experienced a winter, I likely would not have purchased my home.

Nicholas Langhoff, 1581 Beach Blvd

As a born-and-raised Pacifican who grew up in the West Sharp Park area, I've seen the local weather and oceanic conditions change drastically over the last 38 years. I can almost remember when the seawall wasn't there, and there were homes on the west side of Beach Boulevard. As a kid I used to play along the beach north of the pier and literally climb up the face of the seawall on sections all the way up to the northern terminus of beach boulevard; most days today I wouldn't risk even walking around down there. Incidentally, one of my favorite spots to climb was almost right where the wall catastrophically failed in 2016.

In August of 1998 my father, Patrick Rentsch, purchased a four-unit apartment building at 1581 Beach Boulevard. I lived with him there from 2002 – 2005, 2009 – 2012, and again from 2017 on after he passed away in December of 2016. 1581 Beach Blvd is directly south of the proposed project at 1567 Beach Blvd; I'm intimately familiar with this site and the risks associated with it. Even in the early 2000's my Dad and I witnessed the waves rock Sharp Park's coastline and persistently chip away at the Retaining Earth (RE) wall's structural integrity. We saw overtopping waves break over unsuspecting visitors in front of our place taking in the view (either on or breaking over their entire vehicle). Wave overtopping routinely breaks onto the second floor of the building, which is set back about 70 feet from the RE wall. During storm seasons the waves shake the entire building as they slam into the face of the wall. This very action may well ultimately destroy this section of the wall.

I've observed high surf and overtopping conditions get progressively worse in recent years. In the nearly 20 years my father lived at 1581 Beach Blvd, we've seen all kinds of ocean-induced destruction including the homes on Esplanade slipping into the sea and the 2016 failure of the wall. Still in all that time, nothing significantly damaged the building at 1581 Beach. Then in January 2017 a rogue runup wave impacted the property with brute force, which completely demolished the entire fence and sent all the patio furniture sailing around the building as the entire site flooded over 150 feet back from the RE wall. In my opinion as both an engineer and a sharp park resident with decades of observational data, this site is not suitable for new development without reinforcing or replacing our little RE wall that's doing its best, though still failing, to hold the ocean at bay.

Exhibit F – Personal accounts/media reports/statements on the record

MEDIA REPORTS

KTVU News Fox 2, January 22, 2016
https://archive.org/details/KTVU_20160123_020000_KTVU_Fox_2_News_at_6pm/start/120/end/180

(Reporter) This cell phone video in slow motion shows the size of the waves residents here on Beach (Boulevard) were up against this morning. Terri Jackson encountered an even bigger one.

(Terri Jackson) I was a little shook up. I actually stopped shaking about 45 minutes ago because I was pretty frightened. (Reporter) Jackson said she came out to the front yard to check on her damaged fence. That's when a 25-30 foot wave came calling. (Jackson) The sneaker wave came behind me and literally picked me up and pushed me into this area. I was trapped. (Reporter) She says debris was pinning her against the wall. (Jackson) I panicked because the next wave was coming in and I had to get out of that space. (Reporter) Jackson spent the rest of the day cleaning up the mess. (Jackson) All these could end up in my window. These are cobble stones, the last thing I want flying through my window. (Reporter) This is the same spot where a sinkhole opened up earlier this week filled in by boulders as a temporary repair. Plywood is going up on ground-floor windows. The huge waves are due to a combination of el Nino, recent storms, and king tides. (Jackson) You never realize how horribly strong a surge of water can be until you are caught in it.

YouTube Video, January 23, 2016, Mila Zinkova (includes KTVU News broadcast)
https://www.youtube.com/watch?v=HYamOHcDtrE&feature=youtu.be

First Reporter: "We have some video to show you this morning. New video, this man getting pummeled by a wave in Pacifica. Watch this thing that comes up to him as he is trying to take a selfie*. Oh no, there it comes. Oh, Crashing over the top of him. Now listen, I can tell you, I've been out at that very spot and hit by one of those waves" <Second Reporter, "and I have too"> First reporter, "...and almost killed almost dragged back out, so please don't do it." Second Reporter, "not worth it. Not worth the selfie. This was sent in by Terri Jackson, that is the same woman whose home was actually hit by a sneaker wave, along Paloma Avenue and Beach Blvd on Friday morning, she was pushed up against the wall of her home while she was trying to clean her porch, so it just emphasizes the danger of these waves."

Pacifica Tribune, Letters to the Editor, January 18, 2006 from Anjanette Stutes, Sharp Park
(Cited in the SLR Vulnerability Assessment, Draft, January 2018, Figure 4)

I would like to take a moment to reiterate the warning about watching the waves along the sea wall. On 1/2/06, while standing on Beach Boulevard, I was hit by a massive wave that blew over the sea wall near the Pacifica Pier. I was under water for several seconds and, when I was finally able to breathe and open my eyes again, was completely stunned to find myself sitting on the floor near the back of someone's garage with my arm hooked through a barbeque pit. I was extremely fortunate to not have sustained major head and neck injuries, or been impaled on something, crushed against the bumper of a car or killed.

Thinking back on the two days prior to this incident when I watched people with their young children enjoying the beauty of our ocean during high tide at this location, I shake with fear. PLEASE be mindful of the powerful force behind that beauty and take extreme caution with your children and yourselves. Had it been a child in my shoes that day, I'm certain they would not have fared the situation as well as I did. I wasn't taken away in an ambulance but have had several visits to my doctor and now, two weeks later, still have residual pain because of my injuries.

East Bay Times/San Mateo County Times, Erosion by Surf Worries Some Beach Boulevard Neighbors, Julia Scott, February 9, 2007, https://www.eastbaytimes.com/2007/02/09/erosion-by-surf-worries-some-beach-boulevard-neighbors/

Surf washes over the guard rail and pounds Beach Blvd during the El Nino storms of 1998. Beach Blvd is closed to traffic several times a year due to dangerous surf.

Nancy Merchant used to think she was safe walking by the water on Beach Boulevard. That changed one day in 2002, when the ocean got rough and started spitting surf over the guardrail she was standing behind. "All of a sudden, I could see this wave looming up, and I ran into the middle of the street. The wave came up and drenched me," Merchant said.

Welcome to life along Beach Boulevard, where powerful, high winter tides pound the sea wall and burst over the guardrail, soaking passers-by, battering cars with rocks and marine debris, shattering windows and flooding garages of homes no more than 50 feet from the lip of the ocean.

Pacifica Tribune, Interview with Raymond Biagini, City of Pacifica, Public Works by Jean Bartlett on December 16, 2014, https://www.mercurynews.com/2014/12/16/public-works-weathering-storms-to-serve-the-community/

Biagini, who started as a maintenance worker with Public Works 30 years ago, still recalls one of his most frightening storm experiences. It was 10 plus years ago and he was a supervisor at the time.

"It was raining cats and dogs and the wind was howling," Biagini said. "It was just north of the Chit Chat on Beach Blvd. and the waves were getting underneath the seawall creating a void. We thought if that thing opens up, the street is three feet away and a house is 10 feet away. But how do you stop Mother Nature? I'm on the backhoe trying to put debris back in this sinkhole when one of those big waves hits me on the side and I was knocked all the way across the street into the sidewalk. But we fixed it."

Video Links

https://www.youtube.com/watch?v=XikZ4akJJns
At the beginning, complete flooding at Beach Blvd and Paloma - street blocked off

https://www.youtube.com/watch?v=vcg84Mn4YUc&feature=youtu.be
Above has video of directly in front of north Beach Blvd.

https://www.youtube.com/watch?v=hWOB1E3xgqo
Also directly by the project site. On a beautiful non-stormy day

https://www.youtube.com/watch?v=G54LWixACFc
Beach Blvd north of pier ongoing water coming over

https://www.youtube.com/watch?v=SIXH1066aRo

https://www.youtube.com/watch?v=7lg-SliupQ4
North of pier showing water going up street

https://www.youtube.com/watch?v=4sieSr3CYJU
On North Beach Blvd (this is the video she was intentionally taking when it was thought she was taking a selfie -- she's documenting what it's like)

https://youtu.be/V8USzY5IXAM
2016 Wall Breech footage 01

https://youtu.be/vDV3B0CnPQU
King tide footage

https://youtu.be/RgV5zmd2NhU
Sand thrown up by waves far past 60 feet

https://www.latimes.com/projects/la-me-sea-level-rise-california-coast/
The California coast is disappearing under the rising sea. Our choices are grim.
California's coastline is eroding with every tide and storm, but everything built before we knew better is fixed in place with nowhere to go.
LA Times article with feature video of Pacifica

STATEMENTS ON THE RECORD
Lesley Ewing,
California Coastal Commission, Senior Engineer, Email re Site, May 25, 2007

People should not be living along a road that gets flooded from winter storms and just because there are people there now, does not mean we (the society we, not the CCC we) should be encouraging more people to join the risk.

Ray Donguines, City of Pacifica Engineer
Planning Commission Meeting, May 6, 2019
https://www.youtube.com/watch?v=IlZovqeJX9E&list=PLFUunuheJ0ZUFzWFh7lOpSSOdUYabsEZK&index=5&t=1367s <20 minutes in>

"The street closures that public works places along Palmetto ***are basically for safety***. It does allow residents to access their residence."

Commissioner Tygerjaz Bigstyck (CTB)"...Following along since 2016, Every month City Council reaffirms there is a local State of Emergency of the coastline from Westline to the end of Beach Blvd correct?

Planning Director Wehrmeister indicated "yes".

CTB, "And we're talking about Westline to the southern end of beach Blvd, right?"

Planning Director Wehrmeister, "correct".

CTB, "How close leading into the driveway leading into the development, were the sinkholes on the Promenade, how close to Paloma were the sinkholes back in 2016?"

Ray Donguines, "It was right there adjacent to the intersection, just along the walking path, right at Paloma basically."

CTB, "I remember the fencing being there while the repairs were going on. Was there a substantial amount of Beach Blvd cut off to through traffic?

Ray Donguines, "Basically the intersection at Beach Blvd and Santa Maria was closed off for approximately six months."

CTB, "When wave overtopping events take place, I would imagine the street on Beach Blvd floods at bit, correct?

Ray Donguines, "Yes."

CTB, "and when that flooding occurs, is access to Beach Blvd cut off?

City PW Staff: "That is not the main reason for closure, we mainly close it for ***safety of travelers*** or other people who are watching the waves, so we make it for residents only."

Xana Cook, 1 Paloma Ave.
City Council Meeting, Public Comment, June 24, 2019

I'm a longtime resident of Pacifica. I grew up here. I went to Laguna Salada Alternative School. My daughter is now a student going into 2nd grade at Ocean Shore. I live at One Paloma, the yellow apartment building you saw in many of the photos there. This is my firsthand witness testimony

that this is a terrible idea. My neighbor was pinned against the side of the building in 2016, I had to come to her rescue. This water. This spray of ocean water, it's rocks, it's debris, it's driftwood. It's a serious hazard for people. It's June and it's currently overtopping. This is just a normal day and it's overtopping.

My building at One Paloma regularly shakes. It feels like thousands of earthquakes every day. I get to leave; I'm a renter. When this project starts, I get to move on. But the people that have permanent homes here are affected more than me.

Exhibit G – Reports of wall failure due to undermining

While there has been much exploration and discussion of the stability of the existing RE wall, the cause of failures identified in the pieces below has not been explored.

January 2001, CDP 2-01-026, CCC Th14a-5-2002

The seawall & revetment were "damaged during winter storms in December 2000- January 2001. The revetment failed through settling and displacement of revetment stone due to winter storm waves. Overtopping of the shoreline protection caused soil behind the revetment to give way, resulting in sectional collapses of the reinforced earth wall. Repair work under Emergency Permit 2-01-002-G, described above, was begun on January 11, 2001 and completed on January 12, 2001. In addition to approval of the emergency permit work, the City seeks Commission approval to replenish rock washed out by waves and reconstruct the toe of the revetment with 10,000 tons of 7-10 ton rock.

February 12, 2007, Coastsider

https://coastsider.com/%20site/news/pacifica_sinkhole_caused_by_waves_undermining_beach_blvd

A sinkhole measuring 11 feet deep and 30 feet wide has opened below the sidewalk on Beach Blvd near Pacifica Pier. Sinkholes are common along Beach Boulevard, although rarely do they go undetected for so long, according to Holmes. He said the city has *already detected two smaller gaps developing under the sidewalk closer to Paloma Avenue, a quarter-mile away.* The last big problem developed after the El Nino winter storms of 1998, when part off the seawall was so weak that it pulled away from the street and collapsed into the Ocean. The water rushing in created a sinkhole about 30 feet north of the current one, according to Holmes.

March 18, 2008, San Mateo County Times

"Twelve feet down in the bottom of the hole, deep enough to stack two minivans, waves could be seen rushing in from under the seawall to steal away more pieces of soft sand and dirt that, until recently, were holding up the sidewalk."

January 18, 2016, ABC7 News

https://abc7news.com/weather/pacifica-pier-remains-closed-due-to-massive-sinkhole/1164038/

Crews said they have made progress on the sinkhole, but are worried that the damage may expand. "High surf and then we have a high swell, with a high tide that's usually a match for disaster," Pacifica Public Works Director Raymond Biagini said.

Exhibit G – Reports of wall failure due to undermining

Biagini has seen the seawall along Beach Boulevard fail three times before; this is now the fourth time.

January 18, 2016

The photo and text below provide analysis of the undermining causing the wall failure.

(source R. Roggasch – Pacifica resident)

The left arrow points to one point of sprawling oxidation, there are many points along faces. The right arrow points to structural integrity desegregation: water forces and debris and or lateral movements at top of the panel tongue and groove joint cause concrete fracturing. The circle shows an entire tile knocked free by wave action combined with undermining of the wall's structural integrity.

February 4, 2016, ABC7 News

https://abc7news.com/weather/pacifica-residents-on-edge-after-second-sinkhole-opens/1188100/

A second sinkhole Beach Blvd opened along the promenade of Beach Blvd., Pacifica, on February 4, 2016, reported by local officials. The new void, located *near the intersection of Paloma Avenue*, is 7.6m (25 feet) long, 0.9m e feet) wide and 1.2m (4 feet) deep, according to Lorie Tinfow, the City Manager.

Exhibit G – Reports of wall failure due to undermining

March 3, 2016, KRON4 News

https://www.kron4.com/news/video-another-sinkhole-opens-in-pacifica-along-beach-boulevard/

It was first thought to be 4 feet by 6 feet, but when crews opened it up, they found that the erosion underneath was much larger than that. It was 14 feet by 10 feet, and 8 feet deep, according to Van Ocampo from the public works department.

The sinkhole is located right in front of the Pacifica Pier. The hole has now been filled in and patched over. This is the *third sinkhole* the city has had to deal with.

PACIFICA LOCAL COASTAL LAND USE PLAN –PUBLIC REVIEW DRAFT
Chapter 5:Natural_Hazards
5.3 FLOODING
Coastal Flooding
A seawall/revetment structure protects the area north of the Sharp Park Golf Course, generally along Beach Boulevard, including the Pacifica Pier. This structure has required maintenance to repair areas where beach erosion has undermined it.

Pacifica LCP SLR Adaptation Plan DRAFT
Update ESA / D170663.00
July 2018
Page 60

An increase of the design wave by 50% is expected to result in coastal armoring structural failure (USACE, 1984). Given the historic erosion of Pacifica's beaches and the age of the coastal structures, it is not surprising that the structures are being degraded. The larger waves can also induce deeper local scour at the toe of the structure, resulting in sloughing of rocks down and into the ocean, and undermining of seawalls and scour of backing soils. These processes are evident at the Beach Boulevard and Rockaway structures, among others. In summary, we can expect progressive degradation and failure of coastal armoring in Pacifica, requiring extensive maintenance and reconstruction.

Exhibit H – Details of inconsistencies with Moffatt & Nichol (M&N)

The City commissioned Moffatt and Nichol (M&N) in 2016 for a study of coastal hazards at a City-owned property at 2212 Beach Blvd. (http://pacificalibraryfoundation.com/Coastal-Hazards-Technical-Report-wES_ls.pdf).

GeoSoils Inc. (GSI) uses some of the M&N report conclusions for the 1567 Beach Blvd. property, but not their parameters. This discrepancy leads to several inaccurate conclusions by GSI.

The GSI report does not consider the M&N qualifications in the M&N Executive Summary that apply to the sea wall south of the pier. These three parameters must be addressed if the M&N report conclusions are to be accepted:

1) SLR must be no more than 5.5 feet by the end of the century.
2) The existing seawall south of the pier must be kept in repair for the remainder of the century.
3) The beach fronting the seawall in front of Beach Blvd. must be nourished, and continue to be nourished to the end of the century.

M&N also emphasizes: "Given that the beach and the seawall will continue to be maintained, it is estimated that water from wave overtopping would be generally limited to a distance of approximately 40 feet from the seawall" (pg. 298, City of Pacifica packet for 2212 Beach Blvd. Coastal Hazards Technical Report – Moffatt and Nichol Executive Summary).

GSI mentions only minor maintenance but there is no mention of maintaining the beach to help protect the Reinforced Earth (RE) wall. Similarly, Pacifica's staff report excludes any need to nourish the beach.

Unlike the M&N report, GSI's calculations are based on a projected 3' SLR rather than 5.5' SLR to the end of the century. There are now several newer scientific studies that suggest that SLR could top 9 feet by the end of the century. GSI needs more scenarios.

M&N parameters are clear for the existing seawall south of the pier. The new GSI engineering reports and peer review state that the reinforced earth retaining wall (RE), not a seawall, north of the pier will last forty years with only minor maintenance. The report fails to address the fact that a RE is not designed to resist wave loads from the ocean. ("The City Engineer has recognized that the shoreline protection device north of the Pacifica Municipal Pier is not a seawall, and its design has caused it to be subject to multiple localized failures since its installation in the mid-1980s" – staff report pg. 3 City of Pacifica packet for 2105 Beach Blvd.) The major weakness in the RE wall will be from the power of the waves crashing against the front of the wall, not how well the straps on the back of the wall are holding up.

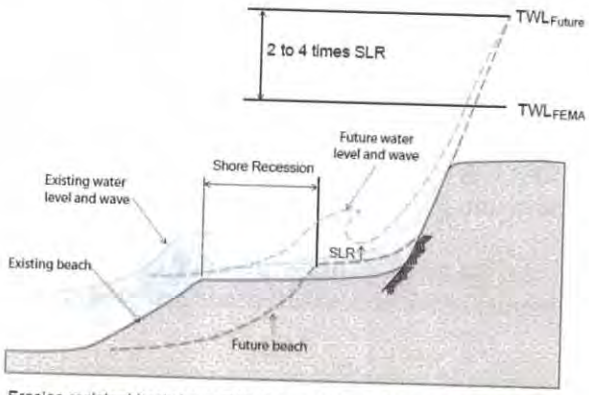
GSI echoes the M&N report conclusion that overtopping will be limited to 40' and uses it to justify the claim of a forty foot overtopping at 1567. However, in January of 2019, city staff requested M&N to comment on a different development at 2105 Beach Boulevard. An email from M&N to the City (January 28, 2019) comments that:

> *"the wave overtopping of the seawall may be greater at the subject site [2105 BB] due to a narrower revetment and beach. The wave run up and overtopping are functions of beach width, beach elevation, seawall height, and distance from the shoreline. The beach fronting the 2105 site has a rock revetment and is narrower than the 2212 site, which implies that run up and overtopping will be different at both sites." (Packet for 2105 Beach Blvd., Attachment F, page 106).*

The RE wall is not a seawall. Without beach nourishment flooding from overtopping will be significantly different. The M&N conclusions for 2212 Beach Boulevard are not applicable to 1567.

More Information about Overtopping

See figure 3.1 from RELATING FUTURE COASTAL CONDITIONS TO EXISTING FEMA FLOOD HAZARD MAPS http://www.oceansciencetrust.org/wp-content/uploads/2016/12/Technical-Methods-Manual_FINAL_2016_12_02_clean.pdf



Erosion resistant backshore: TWL future = TWL existing + (2 to 3) SLR

(Wave runup vertically at a seawall can increase more than the amount of sea-level rise. For example, if sea level increases 1 foot, the potential vertical runup can be 3 to 5 feet (3 to 5 feet times higher increase than the amount of sea level rise). This amplification is the result of the seawall preventing shore migration, while the beach gets narrower water gets deeper and larger waves impact the seawall. (Note that the elevation of runup is called "total water level" because the runup height is added to the ocean water "sea level" to get the elevation of runup.)

Exhibit I – Prior Project Denial

In 2017, the Pacifica Planning Commission and City Council (on Appeal) denied a prior project on this site. A primary concern was "Changes in Beach Boulevard Seawall Conditions". The March 20, 2017 Planning Commission Staff Report states:

"On a number of occasions since the installation of the northern section of seawall in 1984, the City has undertaken emergency actions as a direct result of the actual or impending threat to life and safety due to failure of the seawall. Instances of emergency work to the seawall include:

- *1998: Repair road, walkway and hand rails damaged by high waves;*
- *1999: Installation of approximately 3,000 tons of rock along the northern end of Beach Boulevard to prevent seawall damage*
- *2001-2002: Installation of replacement rock for the severely damaged rock installed in 1999 along the central part of Beach Boulevard due to likely failure of seawall and threat to life and safety; and*
- *2015-2016: Rebuilding a large section of seawall due to failure and collapse under a State of Emergency due to the threat to life and safety.*

"The failure of a significant portion of the seawall during the winter storms of 2015-2016 near the intersection of Beach Boulevard and Santa Maria Avenue was one factor resulting in the declaration of a State of Emergency in the City. Staff reported to the City Council on October 10, 2016 (Attachment G) how the northern portion of the seawall design may have contributed to its failure. Although the lifespan of the structure is difficult to evaluate, the consistent and severe breaches in the seawall over the past 30 years brings into question the structural integrity of the seawall under continuing strong wave action.

"The applicant contends that information it has submitted addresses adequacy of the seawall to protect the subject development. The applicant provided an analysis by Geosoils Inc., dated December 28, 2016, which is based on a 2016 report by Moffatt & Nichol which assessed the condition of the Beach Boulevard Seawall to the south of the pier. As noted above, the seawall designs north and south of the pier are drastically different. The applicant's report did not address the differences in engineering and construction of the north and south portions of the seawall, and also focused on wave overtopping of the wall. The City's concerns include without limitation the distinct seawall design north of the pier, and are not limited to wave overtopping but also include potential accelerated coastal erosion from any seawall failure. Therefore, the results of this analysis cannot be applied to the subject property and further site-specific analysis is required.

"The applicant's report also seeks to minimize the City's concerns about the Beach Boulevard Seawall by stating the City's "need for replacement was based upon protecting Beach Boulevard and the City infrastructure, and based upon NOT protecting any of the residences."

"However, a review of the conditions in the project area make it apparent that Beach Boulevard and City infrastructure are located between the seawall to the west and residences to the east (Attachment H). Without protection of the street and infrastructure, which in the City's opinion may require replacement of the seawall, the project site (located east of the seawall) could be adversely affected if the seawall fails.

"Furthermore, none of the earlier analyses have addressed the adequacy of the seawall to protect the development from severe storms or coastal erosion in light of the known potential for ongoing and repetitive overtopping and failures of the seawall as experienced between 1998 and 2016."

Exhibit J – Neighborhood Character, Parking, Beach Parking and Traffic Circulation

FUNDAMENTAL CHARACTER OF THE NEIGHBORHOOD AND COMMUNITY SCALE – WEST SHARP PARK

The current City of Pacifica, General Plan, 1980, begins with a Goal Statement that includes preservation of neighborhoods.

> *"...Fundamental to the City's character are the traditional neighborhoods. It is a goal of the City to protect the social mix, variety and fundamental character which now exist in each of these neighborhoods by providing for necessary community services and facilities, and for the safety and welfare of all residents equally, but with a sensitivity for the individual neighborhood."*

The proposed development does not preserve the fundamental character of the West Sharp Park neighborhood, documented in the Local Coastal Land Use Plan (dated March 24, 1980, with a second printing in 1992), as "an established low and moderate income residential neighborhood." Nor does the proposed project respect the historic character of the neighborhood, that the City of Pacifica has designated as the "historic district" as exhibited by new street signs along Palmetto Avenue.

West Sharp Park Neighborhood Description (LCP Pages C-32-C-39)

One of the four primary coastal issues detailed in the 1980 LCP for West Sharp Park is: "Protect and continue the low and moderate income housing which provides the unique character and social mix of the neighborhood." The neighborhood character of West Sharp Park is further noted by this statement:

> *"Special attention should be given to the design character of the old bungalow style of housing; small one-story structures, wood siding, incorporation of small porches, and the intimate detailing of window trim, planter boxes, fencing and landscaping. Structures in these areas should be limited to two stories to preserve intimacy and the appropriate scale of development."*

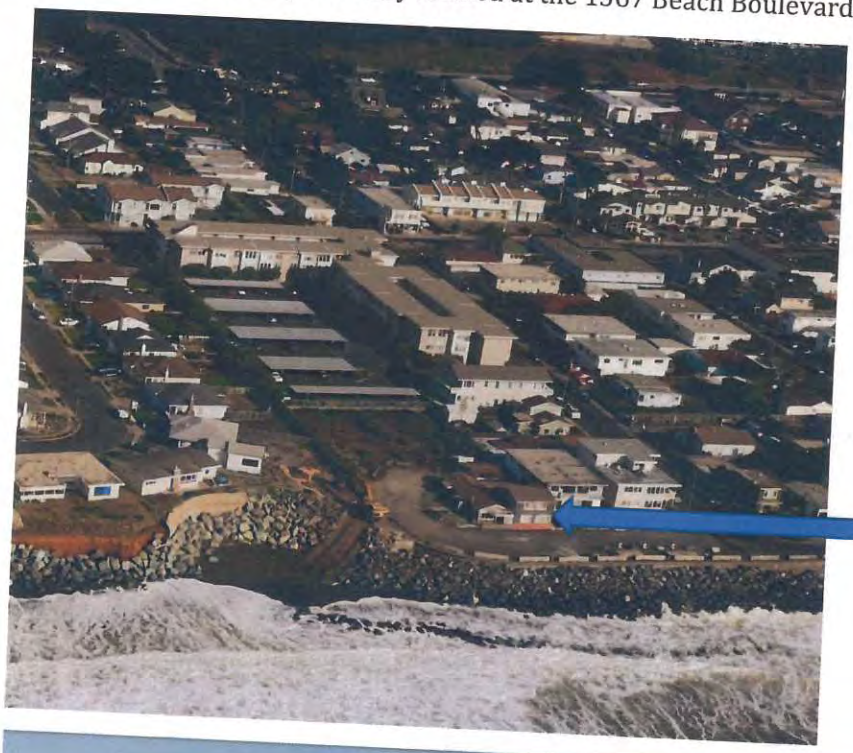
The importance of maintaining "Community Scale and Design" (LCP Pages C-105-C-106) is further amplified in the statement:

> *"The primary thrust of the conclusions for protection of community scale is to control intensification and protect the unique qualities and contributions of some of the existing neighborhoods which include Rockaway Beach's visitor-oriented activities, Pedro Point's mixed social and economic character, Sharp Park's role in providing housing for low and moderate income families with the Coastal Zone, and Edgemar-Pacific Manor and Fairmont's mixture of multiple and single-family homes."*
>
> *Additionally, "The impact of this future development on the open appearance and character of Pacifica's coastline could be substantial. Of particular concern is the area adjacent to the sandy beaches. The conclusions aimed at protecting the existing scale and open appearance and character of Pacifica's coastline (include):*

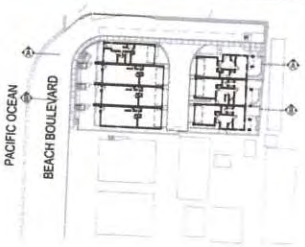
Exhibit J – Neighborhood Character, Parking, Beach Parking and Traffic Circulation

- *Small, older homes shall be preserved and replacement should be at compatible densities and scale.*
- *Modern building and parking standards shall be incorporated in such a way that the existing character of the neighborhood or area is not disrupted.*

The prior structures previously located at the 1567 Beach Boulevard site are depicted below.



Original single-family structures.



Proposed development that doesn't preserve neighborhood character or affordability.

Exhibit J – Neighborhood Character, Parking, Beach Parking and Traffic Circulation

The spirit of the 1980 General Plan and Local Land Use Plan prevail in the draft update to the City of Pacifica's Local Coastal Program (2012) that documents the historical development of Pacifica's neighborhoods including Sharp Park (Pacifica's earliest development occurred with the construction of the Ocean Shore Railroad in 1905, as land speculators subdivided and developed a series of coastside communities. These communities grew out in the 1920's and 1930's, primarily with small, one-story houses, often with detached one-car garages on narrow lots). A Guiding Policy in the updated plan (CD-G-3) continues the focus on Neighborhood Conservation, to "Preserve the unique qualities of each of Pacifica's residential neighborhoods."

It is also important to note that the three-story apartment building on the corner of Paloma and Palmetto was constructed in 1971, prior to the 1980 LCP. The inference is that the apartment building was an anomaly to the desired *"existing scale and open appearance and character of Pacifica's coastline"* due to the emphasis on *"small, intimate, bungalows, one- or two-story"* in the LCP and General Plan.

PARKING, BEACH PARKING & TRAFFIC CIRCULATION

1980 Pacifica LCP Policy 25 / Section 30252 of the Coastal Act state in relevant part:

> *"The location and amount of new development should maintain and enhance public access to the coast by:*
>
> *(d) Providing adequate parking facilities or providing substitute means of serving the development with public transportation"* [C-10, C, LU]

The Local Coastal Land Use Element for West Sharp Park (Sharp Park School to North Side of Montecito) [C-32 – C-33] states:

> *The primary coastal issues in West Sharp Park include:*
>
> *2. The level of beach access and appropriate numbers of parking spaces effectively located to reduce the existing serious resident-visitor parking conflict. Key to this issue are creative solutions which do not result in wholesale paving or removal of existing homes;*

Page C-35 adds:

> *"The need for public beach parking at the north end of Beach Boulevard is recognized. This parking need should be considered along with future development in close proximity to the north end of Beach Boulevard."*

1980 Pacifica General Plan [-71-] states:

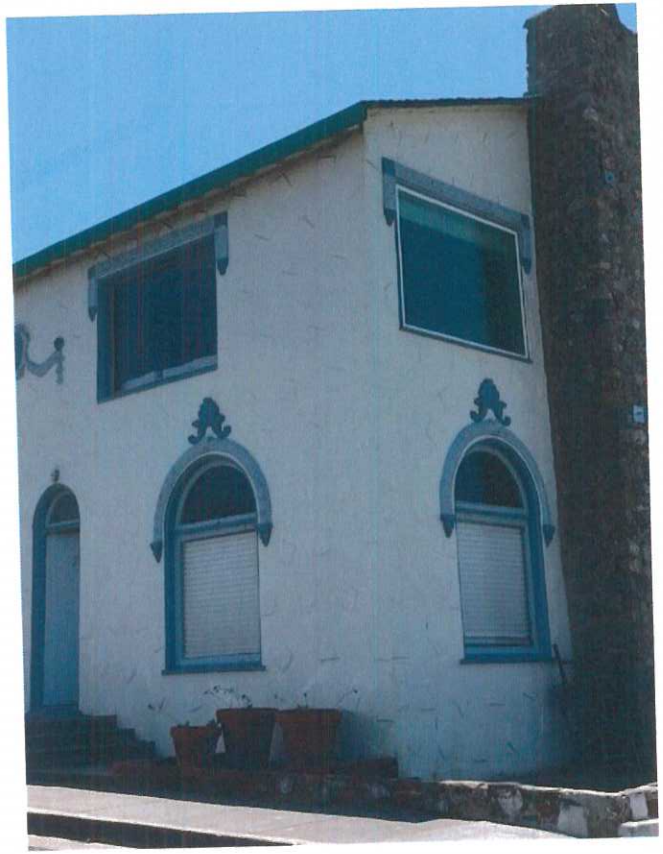
> *As described in each sub-area discussion above, parking is a critical neighborhood problem, particularly in the southern half of West Sharp Park where beach and visitor parking demands overlap with the needs of older residential areas built prior to modern off-street parking requirements. A concerted effort to reduce bluff erosion by removing illegal bluff-top parking will further compound the parking problem.*

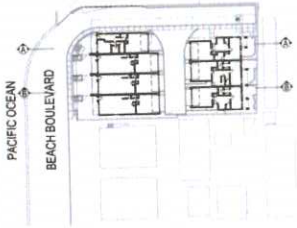
The Pacifica Design Guidelines, 1990 (Rev. 4/23/90), under the section titled "Special Problems and Suggested Solutions" for "Infill Development" [-15- to -16-] states:

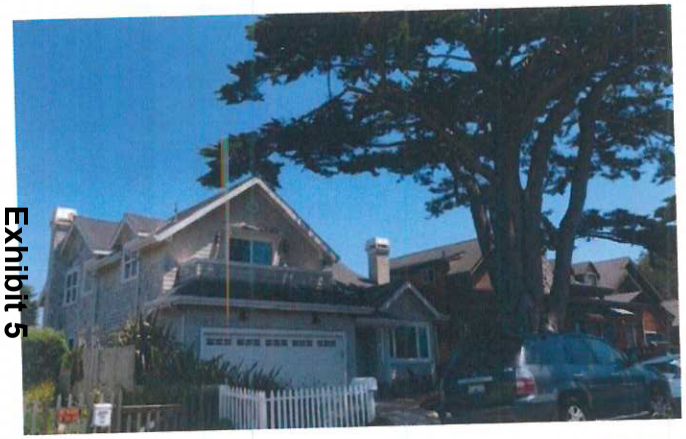
> *2. Parking and Traffic. Older neighborhoods will often have substandard street widths and have problems with on-street parking and circulation.*
>
> *(a) More off-street parking than required by the Zoning Ordinance should be provided to allow ample space for guest parking.*

Much has changed since the 1980 and 1990 documents, most significantly the construction of the RE wall north of the pier in 1984 and the seawall south of the pier in 1987. However, the substandard street widths (narrow one-way streets) and deficit of parking spaces from older developments still exist, and problems with traffic circulation are exacerbated with intermittent road closures each winter.

Although the project would conform to current zoning guidelines for on-site parking (and exceed by one space since only one guest space is required for 7 units), no new street parking would be provided by the proposed development for new residents and guests. Instead additional demand would be created for existing parking on the nearest streets, which have a serious deficit caused by older parking requirements. For example, the apartment building on Paloma Avenue contains 71 units and only 78 parking spaces. No street parking for coastal access is available along Beach Boulevard north of the pier.







How does this new development fit and preserve the character of *Historic Sharp Park*?

File Jacket Cover For

ACTION	X	DATE	Int'l
Application received	X	7/29/19	mem
Fee received Amount $			
Envelopes / Property List Rec /			
Location Card			
Application Filed Applicant Notified			
Staff Reported Completed Revised			
Hearing Notice Mailed	X	7/29/19	mem
Commission Action			
NOI Mailed			
Permit Mailed			
Signed Permit Received			
Condition Compliance			
INCLUDE WITHIN FILE			
Copies of staff reports			
Hearing Notices / Preliminary Agenda			
Correspondence			
Slides / Photos / Plans			
List of additional file Documents-Precedential Decision, Technical Reports, LUP/LCP			

Commission notification of Appeal Mailed

COMMENTS

PERMIT NO.
A-2-PAC-19-0160

APPLICANT(s):
Ciyavash Moazzami
23 Montecito Avenue
Pacifica, CA 94044

PROJECT DESCRIPTION:
Construction of one four-unit, two-story building and one three-unit, three-story building containing a total of seven "town home" style condominium units on a 19,476 square foot (0.447 acre) vacant lot.

LOCATION:
1567 Beach Blvd, Pacifica (San Mateo County)

APPELLANT(s)
Nicholas Langhoff
1581 Beach Blvd. #3
Pacifica, CA 94044

GRG/Pacific Ventures, LTD, a California limited partnership
c/o Aaronson Dickerson Cohn Lanzone
1001 Laurel St., Ste. A
San Carlos, CA 94070

AGENT:

COMMENTS:
Date Filed:
Staff: Julia Koppman Norton
30th Day: _____
49th Day: 10/7/2019
90th Day Extension Requested:
180th Day:
270th Day:
Document # _____
Incomplete _____
Add'l Info.Received _____
_____
D. Waiver _____
R. Waiver _____

Plans Sent Out _____

DDR:

Imm. Ext. or Amend. Release Date:

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200
FAX (415) 904-5400

May 21, 2020

GEOTECHNICAL REVIEW MEMORANDUM

To: Julia Koppman Norton, Coastal Program Analyst

From: Joseph Street, Ph.D. P.G., Staff Geologist

Re: 1567 Beach Blvd., Pacifica (Moazzami), Appeal No. A-2-PAC-19-0160

Summary

Based on a review of the applicant's geotechnical reports and other relevant information, I evaluate the total setback needed to protect new development at the site from slope instability and bluff erosion over the next 50 – 75 years, without reliance on shoreline protection. The chief short-term geologic hazard at the site involves rapid episodic bluff erosion and retreat during winter storms; a setback of at least 30-feet should be maintained over the life of the project to protect against such episodes. Additionally, future bluff retreat at the site over the next 50-75 years, without shoreline protection, could range from approximately 105 – 180 feet in the applicant's analysis to nearly 300 feet using precautionary assumptions about the bluff erosion response and the high projections of future sea level rise recommended for use by the 2018 State Guidance. In all cases, the proposed development would be threatened by bluff retreat and would be reliant on continued shoreline protection. Under a scenario in which the shoreline protection is maintained for the next 40 years, but then removed in 2060, substantial bluff retreat would still occur over the remaining 10 – 35 years of the project life, but a reduced project footprint could potentially be found safe from geologic hazards even under high SLR scenarios.

Introduction

In connection with the above-referenced appeal, I have reviewed the following documents directly related to the subject property:

1) GeoSoils, Inc., 2017, "Coastal Hazard Discussion 1567 Beach Blvd. and Inspection of City of Pacifica Shore Protection Fronting 1567 Beach Blvd, Pacifica, San Mateo County, California", report dated November 27, 2017, signed by D. W. Skelly.
2) GeoForensics Inc., 2017, "Geotechnical Investigation For Proposed Townhouse Complex at the Beach Boulevard Property, 1567 Beach Boulevard, Pacifica, California", report dated December 28, 2017, signed by D. F. Dyckman.
3) SDG Architects, Inc., 2018, Project Plans for 1567 Beach Boulevard, Pacifica, CA", plan set with various dates.
4) SDG Architects, Inc., 2019, "Life Expectancy of Beach Boulevard Project", letter dated September 16, 2019, signed by S. Prickett.
5) GeoForensics Inc., 2018, Slope stability analyses for 1567 Beach Blvd., dated March 21, 2018.

6) GeoSoils, Inc., 2019, "Response to California Coastal Commission (CCC) Request for Additional Information Concerning the Proposed Development at 1567 Beach Boulevard, Pacifica, San Mateo County, California, (CDP 395-18)", report dated October 18, 2019, signed by D. W. Skelly.

I have also consulted numerous other references (listed below), which provide additional local and regional geologic information and context. In addition, I have visited the project area and observed the beach and shoreline protection structures adjacent to the site on several occasions, most recently in December 2019.

The purpose of this memo is to evaluate the total bluff top setback that would be needed to minimize erosion hazards to the proposed new development and assure stability and structural integrity, consistent with the City of Pacifica's certified Local Coastal Program (LCP), over the economic life of the development (50 – 75 years, per Ref. 4). The City LCP requires that new development minimize risks to life and property while ensuring stability and structural integrity without contributing significantly to erosion, geologic instability, or destruction of the site or surrounding area (LCP Policy 26). More specifically, the LCP requires that new development be set back to accommodate "a 100-year event, whether caused by seismic, geotechnical, or storm conditions" (LCP Policy 9-4.4404(d)(5)), and defines the "net developable area" of a site as the portion that would "remain usable throughout the design life of the project" and "be adequate to withstand a 100-year hazard event." (LCP Policy 9-4.4404(d)(3). The LCP also prohibits new development that would rely on a shoreline protective device (Policies 9-4.4406(c), 16, and 26).

To meet these requirements, it is necessary to evaluate risks to the project site over the next 75 years from instability and bluff erosion under several scenarios. The first scenario assumes that existing shoreline protection structures will remain in place. The second scenario assumes that shoreline protection is absent, and the bluff will retreat due to natural processes; this second analysis is critical for determining whether the proposed new development would rely on existing shoreline protection seaward of the site. The memo will also examine potential bluff retreat under a third scenario in which the existing seawall and riprap protection are no longer present after 40 years, beginning in 2060.

In each case, the total setback can be estimated by combining (1) the setback needed, under present conditions, to assure the stability of the proposed development against a major bluff failure or a large, short-term episodic erosion event; and (2) the expected long-term bluff retreat at the site over the full project life, including consideration of future sea level rise. This memo will provide recommendations for the components of the total geologic setback, such that, in combination, the setback would meet the LCP criteria.

Site Description & Geologic Setting

The proposed project involves the construction of a new apartment complex on a bluff top parcel at the northern end of Beach Boulevard in the Sharp Park district of Pacifica, just north of Paloma Ave. and approximately ¼-mile north of the Pacifica Pier. The subject property is located on the landward side of the Beach Blvd. right-of-way[1], approximately 45 feet inland of the top of a concrete seawall, fronted by a rock revetment, which was installed by the City of Pacifica in the mid-1980s to protect Beach Blvd and a municipal sewer line from erosion following the 1982-83 El

[1] Commission staff indicates that there is no formal road, sidewalk or vehicle access along this right of way, but it is used for public access, and by the City during maintenance of the Beach Blvd. seawall and Shoreview revetment.

Niño storms. On its northwest, beyond the end of the City seawall, the project site is protected by riprap occupying an eroded embayment or "cove" in the bluff. This riprap was installed in 1999 to protect a City storm drain and neighboring houses along Shoreview Ave. The most seaward of the proposed new buildings would be located 45 – 70 feet inland of the City seawall, and just 35 feet inland of the top of the "cove" revetment. The coastal bluff at the site is entirely covered by the existing shoreline armoring.

The top of bluff near the seawall occurs at an elevation of approximately +25 feet NAVD88. Elevations on the subject property range from +28 to +36 feet NAVD88 (Ref. 3). Based on the subsurface data provided in Ref. (2), and on geologic descriptions of nearby unarmored bluffs (e.g., RJR Engineering 2018; Collins and Sitar 2008), the subject bluff consists of late Pleistocene-aged marine terrace deposits composed of weakly lithified beach and dune sands interspersed with alluvial sediments. Ref. (2) describes strata consisting of alternating layers of relatively dense silty/clayey sand and sandy clay to depths of 23 - 25 feet below ground surface (to about 5 - 6 ft NAVD88).[2] The depth to bedrock at the site is unknown, but is well below sea level.[3] Based on the bluff composition, historical photographs and the morphology of unprotected bluffs north of the project site (RJR Engineering 2018), the inclination of the natural bluff face would likely range from about 60˚ to near vertical; the slope stability analysis provided in Ref. (5) assumes the bluff face has a slope of approximately 80˚.

Historically, Beach Blvd. was fronted by a relatively narrow, seasonally variable sand beach, a portion of which is still present south of the Pier (Moffat & Nichol 2016). Near the project site, however, the beach is almost entirely occupied by riprap, with little or no sand area occurring above the swash zone under most conditions. The Beach Blvd. seawall is commonly overtopped by waves during winter storms.

Bluff Erosion and Retreat in Pacifica

The weakly consolidated sedimentary deposits that make up the bluffs along the northern Pacifica coastline, including the project site, are highly susceptible to erosion and episodic retreat. Elevated sea levels, high waves, and scoured beach conditions associated with winter storms increase the exposure of the bluff to wave attack, leading to increased erosion at the bluff toe (Lajoie and Mathieson 1998). At the same time, elevated groundwater levels, saturated soils, and seepage at the cliff face resulting from heavy precipitation contribute to upper bluff instability and collapse (Hampton and Dingler 1998). These processes typically manifest as small to moderate slides and block falls, often occurring in quick succession during a single storm event (Collins and Sitar 2008). During winters with frequent or sustained storms, the bluff edge at a given location can retreat by tens of feet as a result of multiple, discrete erosion events.

Severe episodes of bluff retreat in Pacifica have often coincided with El Niño events, which along the California coast bring elevated sea levels and frequent, strong southwesterly storms. For example, in February of 1983, a series of storms breached the shoreline protection at the Pacific Skies mobile home park (~0.25 miles north of project site) and over the course of a month caused 40 – 80 feet of bluff retreat (Griggs et al. 2005). The bluff along the 500 block of Esplanade Ave. (~0.75 mi north of project site) retreated up to 30 - 40 feet over a 5-day period in February 1998

[2] Qualitatively, these deposits are similar to the "moderately cemented" marine terrace sequence identified by Collins and Sitar (2008) as the dominant material comprising the bluffs south of Manor Dr. (~0.8 mi north of 1567 Beach Blvd.).

[3] Ref. (2) reports that a previous subsurface study at the site bored 51 feet below the ground surface (to about -20 ft NAVD88), into silty dune sands, without encountering bedrock.

(Snell et al. 2000; Shires et al. 2001). Substantial localized bluff retreat also occurred during the El Niño winters of 2002-03, 2009-10 and 2015-16, leading to the placement of new protection devices and the removal of bluff top structures (e.g., Griggs et al. 2005; RJR Engineering 2018).

Where reliable historical information (e.g, photographs, topographic maps, etc.) is available, bluff edge positions at different points in time can be compared to calculate long-term bluff retreat rates. If such estimates capture multiple cycles of episodic cliff retreat, they can be useful for safely siting bluff top development. Estimation of a long-term historical bluff retreat rate at the project site is complicated by the fact that the bluff along Beach Blvd. has been protected by shoreline armoring for almost 40 years and has not experienced appreciable erosion during this time, including during recent El Niños.

GeoSoils (2019) (Ref. 6) examined historical vertical aerial photographs along an approximately 1000-foot shoreline segment spanning the project site and estimated the changing position of the bluff edge over time. At the project site, GeoSoils calculated a bluff edge retreat rate of 1.5 feet per year (50 feet in 33 years) for the 1949-79 interval, prior to the emplacement of the seawall. Along the full study area, estimated retreat rates for the unarmored bluff ranged from 0.4 to 1.6 ft/yr. Independent estimates of long-term bluff retreat for the Sharp Park/Beach Blvd. neighborhood of Pacifica are scarce, possibly due to the widespread shoreline protection in this area. Griggs et al. (2005) report retreat rates of 0.3 to 0.6 ft/yr for the bluffs between Sharp Park and Pacific Manor, spanning the project area. Historical retreat rates for the same stretch of coast used in USGS CoSMoS cliff retreat projections (see below) are higher, ranging from 1.8 – 2.95 ft/yr (Barnard et al. 2018), though it is unclear if these rates derive from direct observations or are estimated from historical data available for sites to the north. Higher retreat rates (1 – 2.5 ft/yr) have generally been reported for the bluffs along Esplanade Ave., 1 – 2 miles north of the project site (Lajoie and Mathieson 1985; Snell et al. 2000; Hapke & Reid 2007; Hapke et al. 2007; Griggs et al. 2005).

Based on this review of the available information on historical bluff erosion in the project vicinity, it is my opinion that the bluff edge retreat rate of 1.5 ft/yr from GeoSoils (2019) (Ref. 6) provides a reasonable basis for evaluating future bluff retreat at the project site, though it is worth noting that higher retreat rates have been observed for unprotected bluffs in the near vicinity. Moreover, as discussed in detail below, this historical retreat rate must be adjusted to account for potential future acceleration of bluff retreat related to sea level rise.

Slope Stability & Episodic Bluff Retreat

As outlined in the previous section, the primary geologic hazard to bluff top development in Pacifica is from episodic bluff retreat occurring during large winter storm events, or over the course of particularly active storm seasons. Rapid bluff retreat during the El Niño winter of 1983 was the direct impetus for the placement of shoreline protection along Beach Blvd. and in front of the project site (Griggs et al. 2005). Future large storm events will pose the chief threat to the on-going effectiveness of the existing revetment and seawall and would drive future bluff erosion and retreat in the event the existing protection is damaged or removed. In the local context, the LCP policies requiring that new development be set back a sufficient distance to protect against a “100-year hazard event” (i.e., one caused by “seismic, geotechnical, or storm conditions”) must take into account not only a single slope failure event, but also storm-driven, episodic bluff retreat (consisting of multiple smaller erosion events) occurring within short timeframes.

GeoForensics (Ref. 5) provides a quantitative slope stability analysis of the project site indicating that the bluff is grossly stable under both existing conditions (with shore protection in place) and under the hypothetical scenario in which the seawall and revetment have been removed. In each case, the entire bluff adjacent to and underlying the project site was calculated to have minimum factors of safety above 1.5 for static conditions, and above 1.1 for pseudostatic conditions, assuming strong ground-shaking during an earthquake.[4] Interpreted narrowly, the analysis suggests that the bluff at the subject site would not be at high risk of major slope failures, even during a large earthquake exceeding the 100-year seismic event.[5] Under existing conditions, with the seawall and revetment in place, and assuming these structures have been adequately maintained, no additional bluff top setback would be needed to protect new development against slope failure or episodic bluff retreat.

However, under the "no shoreline protection" scenario, or a scenario in which the shoreline protection is removed at some point in the future, the simple, time-independent stability analysis provided in Ref. (5) does not account for the dynamic conditions under which rapid, large episodic bluff retreat events occur along the Pacifica coastline, and thus does not adequately characterize the "100-year hazard event" with respect to bluff erosion and retreat.

No probabilistic analysis is currently available that has determined the recurrence intervals of bluff retreat episodes of varying magnitude (e.g., the 10-year, 25-year, or 100-year event) in Pacifica. However, Collins and Sitar (2008) documented bluff edge retreat distances associated with individual erosion events at several bluff locations along Esplanade Ave over four winter seasons (2002 – 2006), including several episodes in which the bluff retreated 10 to 16 feet. It seems likely that an approximate "100-year" retreat episode (1% annual chance of occurrence) would be significantly larger than 16 feet, and may be on the order of the very large retreat episodes (up to 80 feet in less than a month) that have been observed historically during sequences of severe storms. In my judgement, an "episodic retreat" setback of at least 30 feet (comparable to the 30-40 feet of retreat in 5 days observed at the 500 block of Esplanade in Feb 1998) is the minimum that can be applied to new development at 1567 Beach Blvd., in the absence of shoreline protection, while still fulfilling the requirement of the LCP to protect against the 100-year hazard event.

Future Bluff Retreat

The previous section evaluated the present-day risk of slope failures and episodic bluff retreat, and concluded that a minimum 30-foot bluff edge setback would be needed to protect against a sudden, severe, storm-driven bluff retreat event (100-year hazard event). However, in order to evaluate whether the proposed development would be protected against such an event over its full design life, and whether the development would require shoreline protection, it is also necessary to evaluate how much bluff retreat could be expected to occur over the next 50-75 years as a result of natural erosional processes, in the absence of armoring. In previous years, the Commission may have deemed sufficient a future bluff retreat analysis which relied on conservative estimates of the historical erosion rate. However, as collective knowledge of the effects of climate change has

[4] The GeoForensics analysis indicates that in the absence of shoreline protection, the natural bluff would have minimum factors of safety (FS) of 1.58 and 1.15 under static and seismic conditions, respectively. Under existing conditions, portions of the shoreline protection could potentially become unstable (FS < 1) during a large earthquake, but the underlying natural bluff would remain marginally stable (FS ≥ 1.1).

[5] GeoForensics assumes a high ground-shaking intensity (K_h = 0.45 g), appropriate for a site near the San Andreas fault. The seismic slope stability analysis accounts for a level ground-shaking beyond what would occur during a "100-yr" earthquake.

increased, it has become necessary to account for the potential effects of significant sea level rise (SLR) on bluff erosion rates (NRC 2012, CCC 2018).

Accounting for Future Sea Level Rise

Rising sea level is expected to cause significant changes to the California coast. For example, a recent study estimates that between 31% and 67% of the beaches in southern California could be lost by 2100 (Vitousek et al. 2017). The loss or narrowing of beaches is likely to lead to increased wave attack at the base of coastal bluffs and increased cliff erosion. More generally, sea level rise (SLR) shrinks the distance between the wave breaking point and bluff positions, results in deeper water and reduced wave attenuation, and increases the frequency and effectiveness of wave attack, increasing bluff erosion. A recent modeling study projects that future bluff retreat rates in southern California could increase more than two-fold relative to historical means under higher sea level rise scenarios (Limber et al. 2018). Other effects of climate change, such as possible changes in storm tracks, wave climate and the frequency of large El Niño events (e.g., NRC 2012; Wang et al. 2017), will also influence rates of bluff retreat. As the available science develops, bluff retreat rates derived from historical information need to be modified to address these concerns.

At present, the Commission recognizes two recent reports from the California Ocean Protection Council (OPC) as providing the best available sea level rise science for California (CCC 2018). The first report, *Rising Seas in California: An Update on Sea-Level Rise Science* (Griggs et al. 2017) synthesizes recent evolving research on sea level rise and provides California-specific projections of future SLR, under several greenhouse gas emissions scenarios, within a quasi-probabilistic framework.[6] For example, under a high emissions pathway (RPC 8.5), the report estimates that SLR in the San Francisco (including Pacifica) area could exceed 2.5 feet under the 50% probability scenario (median model result), 4.4 feet under the 5% probability scenario (95th percentile model result), and 6.9 feet under the 0.5% probability result (>99th percentile result), by 2100. The projections also include an extreme SLR scenario ("H++") of 10+ feet by 2100 based on recent studies suggesting the potential for rapid, high magnitude ice sheet loss, for which no probability was estimated.[7]

The second report, the *State of California Sea-Level Rise Guidance 2018 Update* (OPC 2018, "State Guidance"), builds on the science report and provides recommendations for how to plan for and address sea level rise impacts. The State Guidance recommends specific sea level rise projections for use in different types of planning and policy decisions, depending on the appropriate level of "risk aversion" that applies to a decision. Most pertinently, the State Guidance recommends that the 1-in-200 chance (0.5% simulated probability) projections be used for "medium-high risk aversion" decisions, including the siting of residential development, for which

[6] Following the method of Kopp et al. (2014), the "probabilistic" projections provided in the *Rising Seas* and State Guidance reports reflect the probability that a given amount of SLR was predicted by the ensemble of climate models used to estimate future SLR (from processes such as thermal expansion, glacier and ice sheet mass balance, oceanographic conditions, etc.). These simulated probability distributions will be updated in future updates to the State guidance documents as climate science continues to evolve and models are updated.

[7] New SLR projections produced as part of California's Fourth Climate Change Assessment attempt to include such ice sheet processes within the probabilistic framework of the State Guidance (Pierce et al. 2018). These projections significantly exceed the OPC (2018) projections in the latter part of the 21st century. For example, the median (50th percentile) and 95th percentile (5% probability) SLR projections in 2100 (RCP 8.5) in the new study are almost twice as large as those provided by OPC (2018). The "0.5 probability" (>99th percentile) SLR projections recommended for use by OPC (2018) would fall in the 86% percentile in the Pierce et al. (2018) study.

the consequences of being wrong are higher, potentially risking life and property, and the range of adaptation options is more limited. The recommendations contained in the 2018 State Guidance are deliberately precautionary, in large part because the OPC and other state agencies that contributed to the reports recognized the high degree of uncertainty associated with the course of future sea level rise. Future sea level will be determined both by societal choices (influencing future emissions pathways) and by the physical responses and feedbacks of the earth system to rising temperatures and greenhouse gas concentrations, which remain only partially understood. It is important to recall that the future sea level rise "probabilities" provided in the State Guidance reports are simulated probabilities, reflecting only the percentile outcomes of the modeling exercise, and are subject to the same assumptions and limitations as the climate and sea level rise models themselves.

Future Bluff Retreat at 1567 Beach Blvd. - "No Protection" Scenario

If the existing shoreline protection (seawall and revetment) is repaired and maintained over the next 50 – 75 years, it is reasonable to conclude that the proposed development would not be threatened by future bluff retreat. However, to determine whether the proposed development would be reliant on this protection, it is necessary to evaluate the potential for future bluff retreat under the "no shoreline protection" scenario. As described below, the October 18, 2019 coastal hazards analysis provided by GeoSoils, Inc. (Ref. 6) applied two separate methods for addressing the effects of future sea level rise (SLR) on bluff retreat at the site in the absence of shoreline protection

Simplified SCAPE Equation

GeoSoils's first method was to apply a simple equation estimating the future bluff retreat rate (R_2) as a function of the historical bluff retreat rate (R_1), historical SLR rate (S_1), and future SLR rate (S_2):

$$R_2 = R_1 (S_2 / S_1)^m \qquad \textbf{(Equation 1)}$$

Equation (1) is a "best fit" equation derived from a more complex, process-based numerical model (Soft Cliff and Platform Erosion model, SCAPE) developed to simulate the equilibrium response of a shoreline profile to changes in sea level over timescales of decades to centuries (Walkden and Hall 2005; Walkden and Dickson 2008). The simplified form of the model, Equation (1), was found to apply to shorelines consisting of soft-rock (poorly consolidated) cliffs of uniform composition, in cases where cliff-fronting beaches were absent or of low volume, and which sediments derived from cliff erosion do not significantly influence or "feed back" on cliff retreat rates. The exponent term, *m*, of the best-fit equation was found to be 0.5. The authors indicated that this value was likely to be widely applicable, but Ashton et al. (2011) discusses how *m* could be adjusted to fit a variety of coastal cliff/bluff systems. A value of $m < 1$ describes a "damped" cliff retreat response to increased rates of SLR. In the SCAPE model, this damped response arises from changes in the geometry of the shore profile over time in response to SLR.

GeoSoils (Ref. 6) uses a historical bluff retreat rate (R_1) of 1.5 ft/year, derived from their historical aerial photograph analysis (see previous section), and a historical sea level rise rate (S_1) of about 2 mm/yr as observed at the nearby San Francisco tide gauge (NOAA Stn. No. 9414290). GeoSoils uses a value of $m = 0.33$ (rather than 0.5), which assumes a relatively strong "damped" response to SLR at the site; they indicate that this is appropriate because the transient sand beach at the site will attenuate wave energy prior to impacting the coastal bluff. GeoSoils then estimates

average future SLR rates (S_2) over two time intervals (2019 – 2069 and 2070 – 2119), based on the "intermediate-high" scenario SLR projections provided by NOAA (Sweet et al. 2017), which they conflate with the OPC (2018) intermediate-high risk aversion scenario. For 2019-2069, GeoSoils uses a future SLR rate (S_2) of 0.042 ft/yr (~13 mm/yr); for 2070-2119, S_2 = 0.086 ft/yr (~26 mm/yr). For 2069, GeoSoils calculates a bluff retreat rate (R_2) of 2.7 ft/yr, which is then averaged with the historical retreat rate (1.5 ft/yr) to arrive at an average bluff retreat rate of 2.1 ft/yr for the 2019 – 2069 period. For 2119, the calculated R_2 of 3.4 ft/yr from Equation (1) is averaged with the calculated rate in 2069 (2.7 ft/yr) to arrive at an average bluff retreat rate of 3.0 ft/yr for the 2070 – 2119 period. Assuming no shoreline protection is present, GeoSoils projects that 105 feet of bluff retreat could occur at the project site by 2069 (2.1 ft/yr x 50 yrs), with an additional 150 feet of retreat (3.0 ft/yr x 50 yrs) by 2119, for a 100-year total of 255 feet of bluff retreat.

Any simple modeling approach to projecting future bluff retreat has limitations, and the simplified SCAPE equation is no exception. However, the physical conditions at project site, including a bluff composed of poorly lithified, easily eroded sedimentary deposits, and the absence of a wide protective beach, are a reasonably good fit for the initial assumptions of the equation. Additionally, it is worth noting that Equation (1) projects the *equilibrium* response of the bluff retreat rate to an increase in the rate of sea level rise – in other words, the bluff retreat rate after a single, step-wise acceleration in sea level rise – and does not account for the extended periods of time it could actually take for the bluff system to reach a new, stable retreat rate. Thus, bluff retreat projections using Equation (1) for a given future date are likely to be precautionary. This equation is an acceptable tool for evaluating the potential for future bluff retreat at the project site, but as discussed below, it is important to carefully select the input values used in the equation.

Under the GeoSoils (2019 (Ref. 5) analysis, the bluff top setbacks that would be needed at the project site in the absence of shoreline protection are substantial, ranging from 105 to 180 feet over the next 50 – 75 years. However, as described below, several of the choices and assumptions made by GeoSoils result in less precautionary bluff retreat projections that may not account for the higher end of 21st century SLR projections or the high rates of bluff retreat that could occur at the project site in the latter part of the century.

GeoSoils (Ref. 6) extracted future SLR rates from the NOAA (2017) "intermediate-high" SLR curve by determining the average slope of the curve over the two 50-year time intervals examined (2019 – 2069 and 2070 – 2119). The resulting average SLR rates are significantly lower than the SLR rate projections provided by OPC (2018) for corresponding time periods under its own "medium-high risk aversion" scenario. In other words, the NOAA and OPC scenarios are not equivalent, despite their similar labels. For comparison, OPC (2018) projects SLR rates of 22 – 28 mm/yr (low and high emissions scenarios, respectively) for the 2060 – 2080 period, and 28 – 37 mm/yr (low – high emissions) for the 2080 – 2100 period. The future SLR (R_2) rates used by GeoSoils correspond to lower risk aversion (higher probability) scenarios. GeoSoils' second averaging step, i.e., averaging the calculated 2019-2069 bluff retreat rate with the historical bluff retreat rate, and the calculated 2070-2119 bluff retreat rate with the 2019-2069 rate, and applying these doubly-averaged rates forward, further reduces the projected bluff retreat amounts.

GeoSoils' less precautionary approach is also evident in the selection of m = 0.33 (rather than m = 0.5 as suggested by Walkden and Dickson 2008) as the erosion response term in the simplified SCAPE equation. GeoSoils' argues that the beach at the project site is large enough to partially

protect the bluff from waves, slowing the bluff retreat response to SLR. Such a situation is not directly addressed by Equation (1),[8] but GeoSoils appears to argue that the net effect of the protective beach would be like that of reducing the value of *m*. This makes intuitive sense, and is discussed by Ashton et al. (2011), but it remains speculative that the narrow, low-elevation beach at the project site, which is generally absent under present conditions, would provide a substantial buffer against wave-driven erosion. The specific value of *m* = 0.33 is justified through a comparison of modeling output for a beach in San Diego County (Young et al. 2014); it is not established that this beach is a close analog for the beach at Beach Blvd, nor that the chosen *m* value is a reasonable "bootstrapping" of the simplified SCAPE equation to fit conditions at the project site.

In order to provide a more precautionary point of comparison for the GeoSoils analysis (Ref. 6), I have used Equation (1) to generate new projections of bluff retreat at the site in 50 – 75 years under the "no shoreline protection scenario", assuming *m* = 0.5 and using future SLR rates (S_2) taken directly from the OPC (2018) projections for the San Francisco tide gauge. Specifically, for the 50-year (2070) projection, I used a future SLR rate of 28 mm/yr, which corresponds to the "medium high risk aversion scenario" (0.5% probability of exceedance) for the 2060 – 2080 period under high emissions. For the 75-year (2095) projection I used a future SLR rate of 37 mm/yr (0.5% probability, high emissions scenario, 2080-2100). Once future bluff retreat rate (R_2) values were calculated using Equation (1), I averaged these rates with the historical retreat rate of 1.5 ft/yr to arrive at an average bluff retreat rate for the 2020-2070 and 2020-2095 intervals, respectively (see **Table 1**). Based on these calculations, the total bluff retreat at the site by 2070 could reach 178 feet, and by 2095 could reach 298 feet.

Table 1: Projected Bluff Retreat, No Shore Protection Scenario, using **Equation (1)**

Sea Level Rise Scenario (OPC 2018)	**Timeframe**	**Average retreat rate**, ft/yr (*m* = 0.33)	**Average retreat rate**, ft/yr (*m* = 0.5)	**Future bluff retreat,** ft (*m* =0.33)	**Future bluff retreat,** ft (*m* =0.5)
"Med High Risk Aversion" (0.5% probability) 6.6 ft in 2100	2020 – 2070 50-yr	2.5	3.55	127	**178**
	2020 – 2095 75-yr	2.7	4.0	203	**298**
"1-in-20" (5% probability) 4.4 ft in 2100	2020 – 2070 50-yr	2.3	2.9	113	146
	2020 – 2095 75-yr	2.4	3.2	180	242

USGS CoSMoS Model

The second method used by GeoSoils (2019) (Ref. 6) to evaluate future bluff retreat under the "no shoreline protection" scenario was to consult the Our Coast, Our Future (OCOF) online sea level rise projection tools, which are based on Coastal Storm Modeling System (CoSMoS) models developed by the U.S. Geological Survey (Barnard et al. 2014; Vitousek et al. 2017; Limber et al. 2018, etc.). Ref. (6) reports supposed bluff retreat amount for 1 m (3.3 ft), 1.75 m (5.7 ft) and 2 m (6.6 ft) of SLR, roughly corresponding to the OPC "medium high risk aversion" (0.5% simulated

[8] Strictly speaking, a value of *m* < 1 implies that the horizontal retreat of the bluff in response to SLR proceeds more quickly than the vertical (downward) erosion of the shore platform, resulting in a general elongation of the shore profile, and thus a "damping" of the equilibrium bluff retreat response to SLR (Ashton et al. 2011). A smaller value of *m* indicates a greater disparity between the horizontal and vertical profile responses.

probability projections over the 2070 – 2100 period. The reported retreat amounts range from 40 feet (3.3 ft SLR) to 145 feet (6.6 ft SLR).

The CoSMoS suite of models address a range of coastal hazards under future SLR, including future flooding and wave runup, shoreline retreat, and, separately, bluff retreat. CoSMoS provides a wealth of useful information on both large (area-wide) and small (individual transect) scales, and, along with site-specific geologic and hazards studies and other sources of information, has been consulted by the Commission in previous regulatory decisions. In the present case, however, GeoSoils' use of CoSMoS must be treated with caution, for the simple reason that the "bluff retreat" projections presented in Ref. (6) actually represent the projections of the CoSMoS shoreline retreat tool, which models the future position of the mean high tide line (MHTL), and not the position of the coastal bluff edge. In the CoSMoS output (shown in Ref. 6 as Figures 5 -7), it is the MHTL that would be 40 feet inland of the present-day bluff edge with 3.3 feet of SLR, and 145 feet inland of the current bluff edge with 6.6 feet of SLR. The bluff edge itself would be significantly landward of the mean high tide line.

To understand how much future bluff retreat is actually projected by CoSMoS, I reviewed the CoSMoS Cliff Retreat dataset for the project area (Barnard et al. 2018), specifically the nine bluff transects (Nos. 7937-7945) closest to the project site, spanning the area between the "cove" immediately north of 1567 Beach Blvd. to the 300 block of Esplanade Ave. With 6.6 feet of SLR by 2100, CoSMoS Cliff Retreat projects approximately 225 – 395 feet of bluff retreat (median values) in the project area. These large retreat projections are in part due to the high historical erosion rates (1.8 – 2.95 ft/yr) used in the CoSMoS model. As a second point of comparison, I calculated the factors (for a given amount of SLR) by which the CoSMoS future erosion rates (averaged for 2016 – 2100) exceeded the historical erosion rates, and then applied these "acceleration factors" to the 1.5 ft/yr historical erosion rate provided by GeoSoils. The average "acceleration factor" across the nine transects for 6.6 ft of SLR by 2100 was approximately 1.6, yielding a future erosion rate of 2.35 ft/yr (averaged 2016-2100) and a 75-year retreat amount of 176 feet.

Summary: Bluff Retreat, No Shoreline Protection

In summary, the total future bluff retreat (no shoreline protection) that can be expected over a project life of 75 years, under future high sea level rise conditions, ranges from approximately 175 feet (CoSMoS "acceleration factor" analysis, GeoSoils analysis) to 300 feet (precautionary SCAPE analysis) or beyond (CoSMoS Cliff Retreat). This range reflects the large uncertainties associated with future SLR and bluff erosion responses to SLR, and the differing assumptions used in the various analyses. Nonetheless, in all cases it is clear that the new development proposed at the site, located just 35 – 70 feet from the existing shoreline protection, would be reliant on the continued presence of this protection for safety and stability, even without considering the need to protect against a major episodic bluff retreat event over the full project life.

Scenario 3: Shoreline Protection Removal in 2060 (40-yr Structure Life)

At the request of Commission staff, I have also evaluated a third scenario in which the existing shoreline protection devices (seawall and revetment) are assumed to have be removed 40 years from present, in the year 2060 (reflecting the City's estimate of remaining life of the seawall). GeoSoils (2019) (Ref. 6) included an analysis in which it was assumed that the existing seawall failed after 40 years, but the revetment was retained and remained functional; this amounts to a lowering of the effective height of the shore protection, exposing the upper bluff materials to erosion during high wave conditions and resulting in a limited amount of bluff edge retreat (up to 50

ft by 2095). The current exercise takes a step further, assuming that no shoreline protection at all is in place beginning in 2060.

Beginning in 2060, the bluff is assumed to be re-exposed to wave attack, along with a mean sea level that could have risen by 2.6 feet (above the recent historical average, 1991-2009) under the OPC (2018) "medium high risk aversion scenario (0.5% simulated probability). Under this scenario, sea level would continue to rise at an accelerating rate, with an average rate of SLR of 28 mm/yr from 2060 - 2080, and 37 mm/yr from 2080 - 2100. **Table 2**, below, presents estimates of the amount of bluff retreat that could occur *after* 2060, over the remaining project life through 2070 (50-yr project life) and 2095 (75-yr project life), based on calculations using Equation 1. In order to carry out this exercise, it was necessary perform the calculations for two "step increases" in the SLR rate, the first from the historical rate (assumed to have affected the bluff prior to shoreline armoring) to the rate that would apply in 2060 - 2080, and the second from the 2060-80 SLR rate to the SLR rate that would apply in 2080-2095, based on the 20-year averaged SLR rate projections provided by OPC (2018).

Step 1: Generate Bluff Retreat rates for 2060-2080 period

S_1 = 2.01 mm/yr (historic/present SLR rate, SF tide gauge)
S_2 = 28 mm/yr (OPC 2018, 0.5% probability scenario)
R_1 = 1.5 ft/yr (GeoSoils 2019)
R_2 = 5.6 ft/yr (m=0.5); 3.6 ft/yr (m = 0.33)

Step 2, **Generate Bluff Retreat rates for 2080-2095 period**

S_1 = 28 mm/yr (OPC 0.5% prob. scenario, 2060-2080)
S_2 = 37 mm/yr (OPC 0.5% prob. scenario, 2080-2100)
R_1 = 5.6 ft/yr (m=0.5); 3.6 ft/yr (m = 0.33)
R_2 = 6.4 ft/yr (m=0.5); 3.9 ft/yr (m = 0.33)

The "average" bluff retreat rates applicable to the two periods could then be used to estimate the amount of bluff retreat that could occur after 2060, using either value of the exponent m for the bluff erosion response sensitivity. The exercise can also be repeated for different SLR scenarios, with different future SLR rates. Table 2 shows the results of the calculation for both the 0.5% simulated probability scenario and 5% simulated probability scenario (assuming high emissions) from OPC (2018).

Table 2: Projected Bluff Retreat After 2060 (Shore Protection Removed) using **Equation (1)**

Sea Level Rise Scenario (OPC 2018)	**Timeframe**	**Future bluff retreat, ft** (m =0.33)	**Future bluff retreat, ft** (m =0.5)
"Med High Risk Aversion" (0.5% probability) 6.6 ft in 2100	2060 - 2070	36	**56**
	2060 - 2095	130	**209**
"1-in-20" (5% probability) 4.4 ft in 2100	2060 - 2070	30	44
	2060 - 2095	110	162

The high rates of SLR projected for the latter half of the century under these scenarios are expected to result in high rates of bluff retreat, particularly if a more sensitive erosion response

(m = 0.5) term is used. Under the most precautionary scenario, the bluff could retreat on the order of 56 feet between 2060 and 2070 (50-year project life), and on the order of 200 feet by 2095 (75-year project life). In either case, at least portions of the proposed development, located 35 – 70 feet inland of the existing shoreline protection, would be subject to erosion and instability. Lesser amounts of SLR and/or more optimistic assumptions about the bluff erosion response result in less future bluff retreat and (in theory) a great likelihood that the project could achieve a 50-year project life under the 2060 seawall removal scenario.

Modifications to the project (such as a reduced building footprint) could increase the buffer against future erosion hazards under this scenario. For example, a redesign that retained only the more inland building would allow for a minimum setback of approximately 105 feet from the nearest existing shoreline protection (**Exhibit 8**). Under the medium-high risk aversion SLR scenario evaluated above (with protection ending in 2060), this 105 foot buffer could protect against bluff retreat, at the projected accelerated rates, for a period on the order of 19 years (m=0.5) to 28 years (m=0.33). If an additional 30-foot buffer is deemed necessary to meet LCP policies related to the 100-year hazard event, then this single-building project, with a 105-foot setback, could protect against erosion under the high SLR/high erosion scenario for about 13 years after 2060, through 2073. With this setback, the reduced-footprint project would have reasonable assurance of safety and stability for approximately 53 years, aligning with the low end of the identified project life.

Conclusion

Based on the evidence and analysis described above, I conclude that the proposed 35 – 70-foot setback would be insufficient to assure the safety and stability of the new development in the absence of the existing shoreline protection structures. If the new development were to be sited so that it did not depend upon the existing seawall and revetment for erosion protection, the applicants' analysis (GeoSoils 2019, Ref. 6) indicates that setbacks of 105 to 180 feet would be necessary protect against future bluff retreat (including some future SLR) over the next 50 - 75 years. My review indicates that the future erosion setback needed to account for the potential effects of future sea level rise under the OPC (2018) "medium-high risk aversion scenario" would be substantially greater, at approximately 200 – 300 feet. Even with a setback of this magnitude in place, an unprotected bluff top structure could still be vulnerable to a rapid, storm-driven bluff erosion episode occurring toward the end of the project life, after many years of progressive bluff retreat. Thus, to meet LCP hazards policies, in my judgement it is also necessary to maintain at least a 30-foot setback from the bluff edge over the full project life to protect against such episodic events. In my estimation, the proposed new development would be entirely reliant on retaining the existing shoreline protection and upper bluff stabilization systems for its future safety and stability.

References

Ashton, AD, Walkden, MJA, and Dickson, ME, 2011. Equilibrium responses of cliffed coasts to changes in the rate of sea level rise. *Marine Geology* 284: 217-229.

Barnard, PL, van Ormondt, M, Erikson, LH, Eshleman, J, Hapke, C, Ruggiero, P, Adams, PN, and Foxgrover, AC, 2014. Development of the Coastal Storm Modeling System (CoSMoS) for predicting the impact of storms on high-energy, active-margin coasts. *Natural Hazards*, 31 p., doi: 10.1007/s11069-014-1236-y

Barnard, PL, Erikson, LH, Foxgrover, AC, Limber, PL, O'Neill, AC, and Vitousek, S, 2018, Coastal Storm Modeling System (CoSMoS) for Central California, v3.1 (ver. 1f, May 2020): U.S. Geological Survey data release, https://doi.org/10.5066/P9NUO62B.

California Coastal Commission, 2018. *Sea Level Rise Policy Guidance: Interpretive Guidance for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits*. Adopted August 12, 2015; updated November 7, 2018.

California Ocean Protection Council (OPC), 2018. *State of California Sea-Level Rise Guidance, 2018 Update.*

Collins, BD and Sitar, N, 2008. Processes of coastal bluff erosion in weakly lithified sands, Pacifica, California, USA. *Geomorphology* 97: 483–501.

Griggs, G, Weber, J, Lajoie, KR, Mathieson, S, 2005. "San Francisco to Año Nuevo", in Griggs, G, Patsch, K, Savoy, L (eds.), *Living with the Changing California Coast*. University of California Press, pp. 228-269.

Griggs, G, Árvai, J, Cayan, D, DeConto, R, Fox, J, Fricker, HA, Kopp, RE, Tebaldi, C, Whiteman, EA (California Ocean Protection Council Science Advisory Team Working Group), 2017. *Rising Seas in California: An Update on Sea-Level Rise Science*. California Ocean Science Trust, April 2017.

Hampton, MA, Dingler, J, 1998. Short term evolution of three coastal cliffs in San Mateo County. California, *Shore and Beach* 66(4): 24-30.

Hapke, CJ, and Reid, D, 2007. *National Assessment of Shoreline Change, Part 4: Historical Coastal Cliff Retreat along the California Coast.* U. S. Geological Survey Open-File Report 2007-1133

Hapke, CJ, Reid, D, Richmond, BM, Ruggiero, P, and List, J, 2006. *National Assessment of shoreline change: Part 3: Historical shoreline changes and associated coastal land loss along the sandy shorelines of the California coast*. U.S. Geological Survey Open-file Report 2006-1219.

Hapke, CJ, Reid, D, and Borrelli, M, 2007. *The National Assessment of Shoreline Change: A GIS Compilation of Vector Cliff Edges and Associated Cliff Erosion Data for the California Coast,* U.S. Geological Survey Open-File Report 2007-1112.

Kopp RE, Horton RM, Little CM, Mitrovica JX, Oppenheimer M, Rasmussen DJ, Strauss, BH, Tebaldi, C, 2014. Probabilistic 21st and 22nd century sea-level projections at a global network of tide gauge sites. *Earth's Future* 2: 383–406, doi:10.1002/2014EF000239.

Lajoie, KR and Mathieson, SA, 1985. "San Francisco to Año Nuevo", in Griggs, G, and Savoy, L (eds.), *Living with the California Coast*. National Audubon Society, Duke University Press, pp. 140-177.

Lajoie, KR, and Mathieson, SA, 1998*. 1982-83 El Niño coastal erosion, San Mateo County, California*. U.S. Geological Survey Open File Report. 98-41.

Limber, PW, Barnard, PL, Vitousek, S, and Erikson, LH, 2018. A model ensemble for projecting multi-decadal coastal cliff retreat during the 21st century. *Journal of Geophysical Research Earth Surface*, doi: 10.1029/2017JF004401.

Moffat & Nichol, 2016. Coastal Hazards Study, 2212 Beach Boulevard, Pacifica. Technical report prepared for the City of Pacifica, June 2016.

National Research Council (NRC), 2012. *Sea-Level Rise for the Coasts of California, Oregon, and Washington*. Washington, D.C.: National Academies Press. 2012.

Pierce, DW, Kalansky, JF, and Cayan, DR, 2018. *Climate, Drought, and Sea Level Rise Scenarios for the Fourth California Climate Assessment*. California's Fourth Climate Change Assessment, California Energy Commission. Publication Number: CNRA-CEC-2018-006.

RJR Engineering, 2018. “Geotechnical & Coastal Engineering Assessment of Current Site Conditions and Risk Assessment, 1112 Palmetto Avenue, City of Pacifica, California”, report dated August 31, 2018, signed by R.W. Anderson.

Shires, PO, Sayre, T, Skelly, DW, 2001. Mitigation of 1998 El Niño Sea Cliff Failure, Pacifica, California. In: Ferriz, H. and Anderson, R. (eds.), *Engineering Geology Practice in Northern California*, California Division of Mines & Geology Bulletin 210, pp. 607-618.

Snell, CB, Lajoie, KR, Medley, EW, 2000. Sea-cliff erosion at Pacifica, California caused by the 1997/98 El Niño storms. Slope Stability 2000. ASCE Geot. Spec. Pub. No. 101, Proc. of Geo-Denver, Denver, Colorado, pp. 294–308. August 5-8, 2000.

Sweet, WV, Kopp, RE, Weaver, CP, Obeysekera, J, Horton, RM, Thieler, ER, Zervas, C, 2017. *Global and Regional Sea Level Rise Scenarios for the United States*. NOAA Technical Report NOS CO-OPS 083.

Vitousek, S, Barnard, PL, Limber, P, Erikson, LH and Cole, B, 2017. A model integrating longshore and cross-shore processes for predicting long-term shoreline response to climate change. *Journal of Geophysical Research-Earth Surface*, doi: 10.1002/2016JF004065.

Walkden, MJA, and Hall, JW, 2005. A predictive mesoscale model of the erosion and profile development of soft rock shores. *Coastal Engineering* 52(6): 535-563.

Walkden, M, and Dickson, M, 2008. Equilibrium erosion of soft rock shores with a shallow or absent beach under increased sea level rise. *Marine Geology* 251: 75-84.

Wang, G, Cai, W, Gan, B, Wu, L, Santoso, A, Lin, X, Chen, Z, and McPhaden, MJ, 2017. Continued increase of extreme El Niño frequency long after 1.5 ˚C warming stabilization. *Nature Climate Change* 7: 568-572.

Young, AP, Flick, RE, O’Reilly, WC, Chadwick, DB, Crampton, WC, and Helly, JJ, 2014. Estimating cliff retreat in southern California considering sea level rise using a sand balance model. *Marine Geology* 348: 15-26.

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200
FAX (415) 904-5400

May 21, 2020

TO: Julia Koppmann Norton, Coastal Program Analyst

FROM: Lesley Ewing, Ph.D. PE, Sr. Coastal Engineer

SUBJECT: Flood and Overtopping Risks for New Development at 1567 Beach Blvd. Pacifica, CA

I have been asked to review flooding and overtopping analyses prepared for 1567 Beach Blvd., Pacifica, and to provide an analysis of possible flood risks if the existing seawall and revetment that front Beach Blvd. were to be removed in 2060, at the end of the identified life of the shore protection. I have reviewed the following reports for this analysis.

- EuroTop (Heft 73, 2007) Wave Overtopping of Sea Defences and Related Structures: Assessment Manual, Environmental Agency, UK; Expertise Netwerk Waterkeren, NL and Kuratorium fur Foraschung im Kusteningenieurwesen, DE; www.overtopping-manual.com.

- Moffatt & Nichol (June 2016) Coastal Hazards Study 2212 Beach Boulevard, Pacifica: Technical Report with Executive Summary, prepared for the City of Pacifica. Project # 9246.

- FEMA, Focused Study Reports (2005) Wave Runup and Overtopping: FEMA Coastal Flood Hazard Analysis and Mapping Guidelines; https://www.fema.gov/media-library-data/20130726-1541-20490-9494/frm_p1wave2.pdf

- Geosoils, Inc. (November 27, 2017) Memo to Mr. John Hansen, “Coastal Hazard Discussion: 1567 Beach Blvd and Inspection of City of Pacifica Shore Protection Fronting 1567 Beach Blvd, Pacifica, San Mateo County, California”, 10 pages.

- GeoSoils, Inc. (October 18, 2019) Memo to Mr. John Hansen, “Response to California Coastal Commission (CCC) Request for Additional Information Concerning the Proposed Development at 1567 Beach Boulevard, Pacifica, San Mateo County, California., (CDP 395-18)”, 17 pages.

- Moffatt & Nichol (June 2016) Coastal Hazards Study 2212 Beach Boulevard, Pacifica: Technical Report with Executive Summary, prepared for the City of Pacifica. Project # 9246.

- Reeve, D., A. Chadwick and C. Fleming (2012) Coastal Engineering: Processes, Theory and Design Practices, 2nd Edition. Spon Press, NY.

SUMMARY: The proposed development site is inland of Beach Blvd. and both the Blvd and development site are currently protected from erosion and some flooding by a vertical Reinforced Earth (RE) seawall and revetment. With rising sea level, the flooding and overtopping will increase, but, the seawall and revetment will minimize flood risks and the development site is not expected to experience significant flood impacts. Beach Blvd will have some runup and overtopping, and over time, this could affect vehicle access to the development site for short periods of time. However, if the seawall and revetment are removed in the future, flooding and overtopping will approach closer to the development site than they will with the protection in place. In addition, the vertical or near-vertical slope will have greater runup and overtopping than estimated for the current seawall and revetment protection. Beach Blvd could experience deeper overflow that could restrict access to the site and the development site could experience more flooding than anticipated with the armoring in place.

Finally, this site could be a risk from a large tsunami. Residents should be alerted to this possibility and they should be notified that they should follow all evacuation orders issued for their location and not rely upon the block wall for protection.

Storm Wave Flooding and Overtopping: The proposed project site is on the inland side of Beach Blvd, just south of a large erosional gully (also known as a 'cove.) that has been filled with rock rip rap. While the cove was formed by uncontrolled inland water, all of the Beach Blvd. shoreline is erosive and the City of Pacifica has installed a vertical reinforced earth (RE) seawall fronted by a rock revetment for erosion protection. The shore protection goes from south of the pier to north to the cove. Over the past few years, sections of this seawall have suffered storm damage, scour holes have developed inland of the wall at several locations and the City has undertaken both planned and emergency maintenance of the shoreline protection.

Beach Blvd. and some of the homes inland of the road have experienced wave overtopping, resulting in some flooding of garages, debris being washed onto the road and, in one instance, debris broke a sliding glass door. For current conditions, the overtopping occurs only for an hour or two for high tide and storm conditions and most property owners are protecting their homes with sandbags. GeoSoils has said that the proposed project site had not been flooded by any of the seawall overtopping events since this site is two to three feet higher than the surrounding area that has experienced nuisance flooding. In addition, GeoSoils has done annual inspections of the existing seawall since 2004 and noted that, "A comparison of aerial photographs available on the Coastal Records website shows little, if any, change in over revetment geometry and the relative positions of the stones fronting the RE wall." (GSI, 2017, pg 2). Also, the City commissioned a study to look for voids behind the wall and no voids were identified inland of the seawall adjacent to proposed project site (No study citation provided).

The GeoSoils reports (2017 and 2019) provided analyses of runup and overtopping that could result from various sea level rise conditions. With sea level rise of 3 feet and the current protection (1:2 revetment slope up to +18' NAVD88, with vertical RE seawall up to +25.3' NAVD88), GeoSoils finds that overflow will be about 1.18 cf/s-ft. GeoSoils states that the wave bore will be about 0.5' deep at the seawall and will dissipate in about 40 feet, as it flows across the Beach Blvd. The 3-foot sea level rise is close to 3.15', the low risk aversion, high emission scenario sea level rise projection for 2095 provided in the 2018

OPC Guidance. 3-feet of SLR was also identified by the consulting firm Moffatt & Nichol (2016) as “a reasonable estimate of SLR over the 75 year design life”. However, both the Ocean Protection Council’s and the Coastal Commission’s Sea Level Guidance recommend that projects, at a minimum, examine the impacts from the upper range of the medium high risk aversion sea level rise (the 0.5% probability that sea level rise will meet or exceed the given amount) which is 6.25’ for 2095, using the projections for the San Francisco tide gauge.

To examine a higher amount of SLR, GeoSoils (2017) provided a printout from the USGS CoSMoS for SLR of 4.9’ and a 100-year storm that showed no change to the shore position and flooding reaching to the edge of the property. GeoSoils also notes that the proposed project will have a 3-foot high wall close to the roadway that will protect from any flooding that might reach the property.

In response to comments from the Commission staff, GeoSoils looked at flood and overtopping risks from some higher sea level rise projections that were included in the 2017 report, and notes that while there is no evidence that the site has experienced overtopping, “over the life of the project, the frequency of overtopping will increase with SLR if no adaptation strategies for the shore protection are implemented by the City.” (GeoSoils, 2019, pg 10.). For higher SLR analyses, GeoSoils provided printouts from the CoSMoS model for 6.6 feet of SLR with a 100-year storm and no change to the shore position; this print out shows that flooding approaches but does not reach the project site. GeoSoils also provided a print-out of analysis by ESA (no citation provided), prepared as part of the Draft Sea Level Rise Adaptation Policies for Pacifica, showing that with the existing protection in place, the limits of wave runup and overtopping with 5.7’ of SLR will reach the seaward limit of the property. Finally, GeoSoils provided an analysis of waves that might reach the site from the northwest, overtopping the rock revetment that is in the cove. With 7’ of sea level rise and the revetment in the cove remaining in place, a small amount of overtopping could occur, but it would not have a significant impact on the project site.

Based on analyses of various sea level rise conditions and with the assumption that all the existing shore protection will remain in place, the GSI reports provided evidence from several different sources that the site will be relatively safe from storm waves and overtopping. Water could come over the seawall and flood the section of Beach Blvd. that fronts this property; but the water depths would not pose significant concerns to the proposed property. With sea level up to about 5.7 feet, the site will remain inland of the flood and overtopping zone; but with higher sea level some water would be expected to reach the property or pond against the wall proposed to be installed at the seaward side of the property. Water could flood the section of Beach Blvd. that fronts this property, and this would interrupt access to the property. For current situations when storm waves overtop the seawall and flood Beach Blvd., the City has closed Beach Blvd, to all but local traffic. This may continue to be the practice; however, as overtopping occurs at 1567 Beach Blvd., this will affect access to the property[1].

[1] Based on information from Commission staff, there is no formal road, sidewalk or vehicle access to 1567 Beach Boulevard or the two residences between Paloma Avenue and 1567 Beach Boulevard (1581 Beach Boulevard and 1 Paloma Avenue), as these other two residences are accessed via Paloma Avenue. The public is able to walk on the paved portion which extends from the walkway on the western end of Beach Boulevard, and the City has used this paved area to access the beach for construction and maintenance of the Beach Boulevard seawall and the Shoreview revetments.

The applicant provided analyses of erosion for future conditions when the revetment fronting Beach Blvd. and in the cove remained in place and in the case that the seawall fronting Beach Blvd. was removed after 40 years; but the applicant has not provided any analysis of flood risks for these conditions or for the fully unarmored condition (removal of both the revetment and the seawall). Overflow of a fully unarmored bluff would be more significant that those estimated for the with-armoring conditions. For the analysis of overtopping of the unarmored condition, it is necessary to estimate the unarmored slope profile. Due to the high rate of erosion in this area and based upon the profiles of unarmored bluffs in the vicinity, a near vertical profile has been assumed[2]. EurOtop (2007) provides both probabilistic and deterministic predictions of overtopping for vertical ad near-vertical slopes. These predictions have been used to develop a range of overtopping for this possible future unarmored condition. Since the predictions are for vertical armoring rather than for an earthen slope, and there are no adjustments for surface resistance, these overtopping rates can be considered an upper limit for the unarmored future conditions. For the future sea level rise conditions of 2.6 feet by 2060[3], the assumed year that the shore protection might be removed, mean overtopping discharge per foot of bluff width could range from 0.3 to 0.56 cf/sec/ft. At the upper limit of 6.25' of sea level rise by 2095[4], the mean overtopping discharge per foot of beach width could range from 2 to 3.76 cf/sec/ft. According to FEMA (2005), overtopping discharge of 0.1 to 10 cf/sec/ft would be the equivalent of a flood zone, AO, with flow depth up to 3' and overtopping discharge greater than 1 cf/sec-ft would represent a high velocity zone, Ve, for a width of 30', then switching to an AO flood zone.

The overtopping discharges that are predicted for a scenario in which the existing shoreline armoring would be removed in 2060, 40 years from now, indicate flooding that could be a threat to the development area. Without the shoreline protection, the bluff would retreat landward and overtopping flows would come closer and closer to the project site with more erosion and flows would increase in depth with sea level rise. During the early years following removal of the shoreline armoring, overtopping would be a nuisance; but the risks to life and property would increase as the bluff erodes and as sea level rises. The risks will likely be manageable for the first decade after removal of the shore protection; but would become less and less manageable over time. Eventually vehicle access to the site, including emergency access vehicles, would not be possible. Due to the possible flood risks associated with the overtopping that could occur after removal of the RE seawall and revetment, it is suggested that this project incorporate conditions identifying this risk and providing for removal triggers if vehicles, including emergency vehicles, are not able to access the site due to flow depths or other restrictions to site access.

[22] The GeoForensics slope stability analysis assumed a bluff profile with 80 deg slope; based on information provided by Dr. Joseph Street.

[3] The medium-high risk sea level rise projection for the high emission scenario; where the medium high risk projections have a 0.5% probability that sea level will meet or exceed this amount,

[4] The medium-high risk sea level rise projection for the high emission scenario; where the medium high risk projections have a 0.5% probability that sea level will meet or exceed this amount,

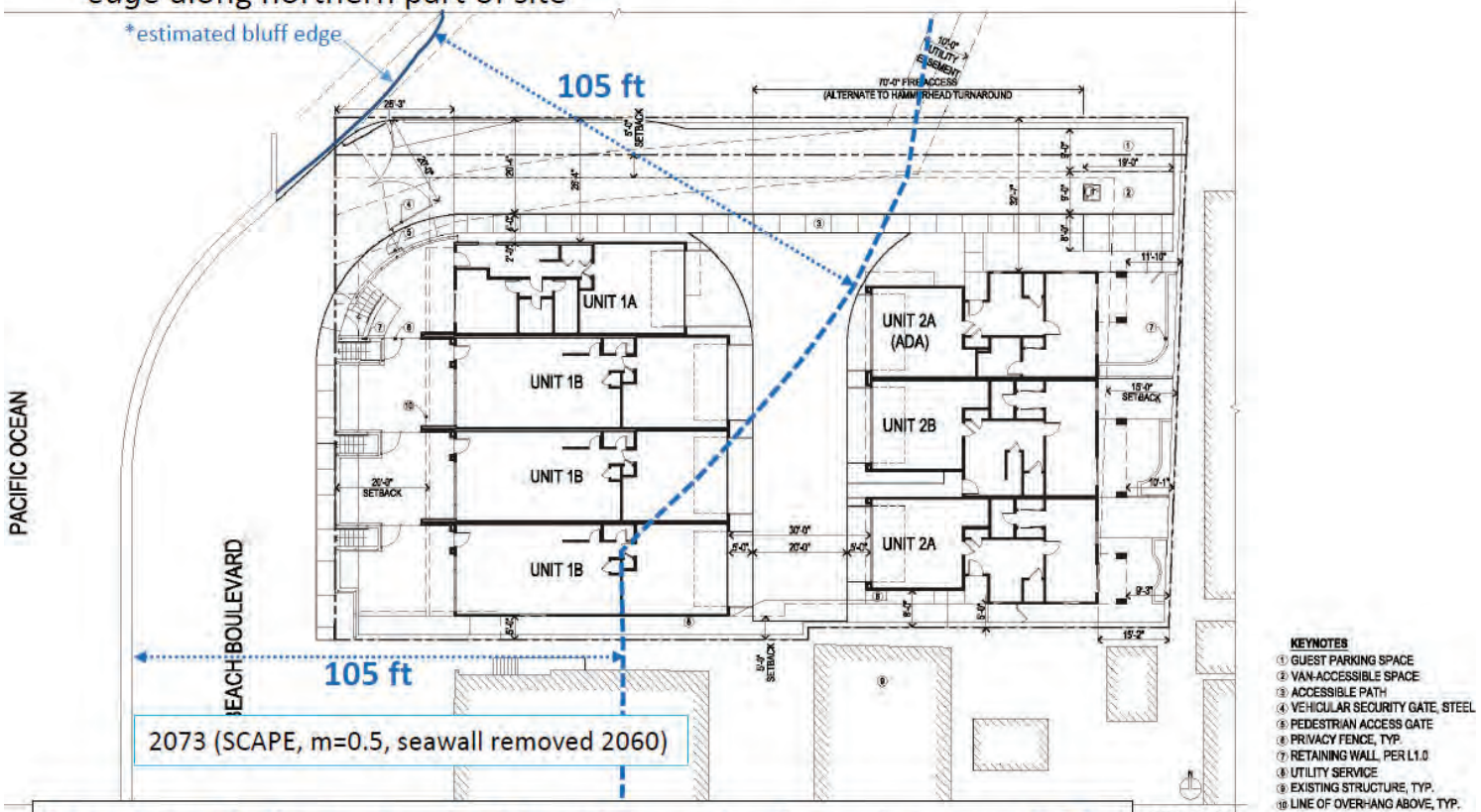
Tsunamis: The GeoSoils report relies upon analysis of tsunami risks prepared by Moffatt & Nichols (M-N) for development along the Pacifica shoreline somewhat south of the project site. The California Office of Emergency Services tsunami risk maps predict inundation up to 36' NAVD88 for a 'maximum probable tsunami' with a return period of about 1,000 years. A 1,000-year average return period event has about a 5% probability of occurrence over a 50-year life of structure and about a 7% probability of occurrence over a 75-year life of structure. The proposed development would have a finished floor elevation of 31' NAVD88, significantly lowered that the inundation zone of the 1,000-year tsunami event. The report by GSI notes that a more frequent tsunami, with a return period of 200 – 240-year return period would have a bore height of about 1-foot and notes that the proposed perimeter wall would be designed to protect the inland development from a tsunami bore of this depth; but a short perimeter wall would not protect from a less frequent but ore intense tsunami. Since the proposed development will be at possible risk from a major tsunami, it would be advisable to develop a special condition that ensures all future residents observe all evacuation orders issued for this area and that they do not rely upon the assurances of protection that might be provided by the perimeter block wall.

1567 Beach Blvd – Required Hazard Setback

Assumptions:

- Design life of development – 50-75 years
- City shoreline protection remains in place for approximately 40 years
- Long-term bluff retreat and short-term large episodic erosion event setback calculated for remaining 10-35 years of anticipated design life of development, assuming no shoreline protection, to capture a potential 100-year event over the life of the project consistent with LCP Policy 9-4.4404(d)(5).
    - OPC medium-high risk aversion (0.5%) SLR scenario
    - Historical erosion rate of 1.5 feet/year (provided by applicant)
    - m = 0.5

*Setback should be measured from *actual bluff edge* along northern part of site*



2073 (SCAPE, m=0.5, seawall removed 2060)

Long-term bluff retreat + short-term large episodic erosion event (+30 ft)

*OPC "medium high risk aversion" SLR scenario

**SCAPE Eqn. analysis assumes Historical ER = 1.5 ft/yr (per applicant)

CALIFORNIA COASTAL COMMISSION
NORTH CENTRAL COAST DISTRICT OFFICE
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105
PHONE: (415) 904-5260
FAX: (415) 904-5400
WEB: WWW.COASTAL.CA.GOV

March 13, 2018

Ranu Aggarwal
Contract Planner
City of Pacifica
1800 Francisco Blvd.
Pacifica, CA 94044

Subject: ***Application for Coastal Development Permit CDP-395-18 at 1567 Beach Boulevard (APN 016-011-190)***

Dear Mr. Aggarwal:

Thank you for sharing the materials for an application with the City of Pacifica to grant a Coastal Development Permit (CDP) for construction of a new seven unit condominium development on a vacant lot at 1567 Beach Boulevard, including one new three-unit building, one new four-unit building, and associated infrastructure. The subject parcel is within the Coastal Commission's appeals jurisdiction, and therefore, Coastal Commission staff appreciates the opportunity to communicate concerns regarding possible coastal resource impacts of the proposed development, especially as those possible impacts pertain to geotechnical issues and coastal hazards. Commission staff still has outstanding concerns with this CDP application and has determined that further information is needed from the Applicant regarding erosion rates, sea level rise, bluff setback, and potential triggers for relocation.

The bluff erosion rate proposed by the Applicant does not appear to adequately account for how erosion rates will be impacted in the future by higher sea levels. The 1.38 feet per year future bluff retreat rate adopted by the Geosoils report is less than the rate adopted for recent development projects in Pacifica, such as the Land's End shoreline protective device and access project (2 feet per year). The Applicant should provide a range of expected erosion rates based on different sea level rise scenarios along with justification for the most accurate rate relevant to the economic life of the proposed project.

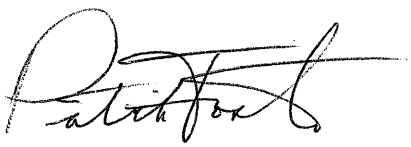
Safe setbacks on eroding bluffs need to consider both the likely retreat of the bluff over the life of the proposed development and the factor of safety that will ensure a safe bluff condition throughout the time that the site is occupied. Please note that such analyses should consider an unarmored bluff condition, thereby ignoring the influence of both the existing Beach Boulevard seawall and revetment fronting the site, as both the Coastal Act and Pacifica's LCP require that new development be sited and designed so as not to require shoreline protection (Pacifica IP, Section 9-4.4406(c)(2); California Coastal Act, Section 30253(b)). Quantitative evaluation of slope stability at the project site is necessary to determine an appropriate bluff setback and to ensure Coastal Act and Pacifica Local Coastal Program (LCP) requirements are met, including that new development be sited to ensure stability for its economic life (Pacifica LCP, Plan

Conclusions, "Geotechincal" pp.C-102, C-103; California Coastal Act, Section 30253(a)-(b)). Stability against bluff failure is defined as a factor of safety of 1.5 (static) or 1.1 (pseudostatic, using an appropriate seismic coefficient). Accordingly, it must be demonstrated that the development will have such factors of safety throughout its economic life, thus requiring a detailed discussion of the appropriate economic life of the proposed condominium development. It is the Commission's general practice, in order to ensure stability for the life of development, that the setback currently required to establish the necessary 1.5 factor of safety be added to the expected bluff retreat over the life of development.

The project site will likely experience some splash and ocean spray during storm events and the influence of sea level rise will inevitably increase the chance of overtopping and sheet flow across the site. Therefore, conditions of approval should include regular monitoring of the bluff and triggers for retreat following bluff erosion, as well as triggers for project reevaluation following flood events. For example, relocation or removal of threatened development could be triggered when structures are within a certain distance of the bluff edge, while a full reevaluation of hazards could be required once two or more flood events reach developed areas. In addition, given that Beach Boulevard will serve as the only roadway to the proposed development, approval of the project should be conditioned to require the Applicant to provide alternative access to the residences in case Beach Boulevard becomes degraded to the point it can no longer be utilized safely. A final condition of approval should include a requirement that adequate parking be provided pursuant to City code in a way that does not impact beach parking, and this condition should apply equally to any potential alternative access plan.

If you have any questions regarding these comments or wish to discuss the project further, please contact me at 415-904-5267.

Sincerely,



Patrick Foster
North Central District Planner

Cc: Ciyavash Moazzami (Applicant)
23 Montecito Avenue
Pacifica, CA 94044

CALIFORNIA COASTAL COMMISSION
NORTH CENTRAL COAST DISTRICT OFFICE
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105
PHONE: (415) 904-5260
FAX: (415) 904-5400
WEB: WWW.COASTAL.CA.GOV

May 6, 2019

Tina Wehrmeister
Planning Director
City of Pacifica
1800 Francisco Blvd.
Pacifica, CA 94044

Subject: Coastal Development Permit CDP-395-18, 1567 Beach Boulevard, Pacifica

Dear Ms. Wehrmeister:

This letter constitutes comment and feedback on CDP-395-18 which is scheduled to be heard at today's (May 6, 2019) Planning Commission hearing. City staff is recommending approval of the construction of one four-unit, two-story building and one three-unit, three-story building containing a total of seven "town-home" style condominium units, on a 19,476-square-foot (.447 acre) vacant lot, at 1567 Beach Boulevard. A variance is also requested for a reduced rear setback.

As a first matter of concern, Coastal Commission staff did not receive notice that this matter (or the other matter going to the City Planning Commission at today's hearing, CDP-397-18 at 2100 Palmetto Avenue) was going to hearing as required by the City's LCP. Per LCP IP Section 9-4.4304(g)(4) (Coastal Development Permit Procedures and Findings) the City is required to provide notice by first-class mail to the Coastal Commission on pending CDP applications, seven calendar days prior to the first public Planning Commission hearing. Please be sure to provide such required written notice to our North Central Coast District office pursuant to this IP requirement to ensure upfront and early coordination and to keep Coastal Commission staff apprised of how City permit decisions are proceeding.

Another concern Coastal Commission staff would like to raise is the lack of adequate evidence to demonstrate that the proposed project has been adequately sited and designed safe from hazards, including increased erosion and flooding due to sea level rise over its economic life, without the need for shoreline protection. LCP Policy 26 requires that new development minimize risks to life and property in areas of high geologic and flood hazards, assure stability and structural integrity, and in no way require the construction of protective devices. Similarly, LCP Section 9-4.4406 prohibits the placement or erection of a shoreline protective device unless necessary to protect *existing* development and prohibits new development which requires seawalls as a mitigation measure or which would eventually require seawalls for the safety of the structures.

As you are aware, and as evidenced in Attachment G to the City staff's recommendation, Coastal

Commission staff wrote a letter dated March 13, 2018 requesting the Applicant assess the increased erosion and flooding hazards posed to the site based on different sea level rise scenarios, including under an unarmored bluff condition. The project plans indicate an approximate seismic slope stability limit with a factor of safety of 1.15 with and without shoreline protection, as well as an approximate static slope stability limit with a factor of safety of 1.5 without shoreline protection. However, it is not clear from the materials provided whether or not these limits include additional setbacks for expected bluff retreat with expected sea level rise over the life of the development.

Further, the GeoSoils consultant report concluded that wave overtopping would extend about 40 feet from the top of the existing shoreline protection. Thus, the staff report finds that the proposed buildings would be safe due to the setback of 68 feet from the seawall. However, the City staff report itself says that the "applicant has no control over whether the seawall shall remain or be removed because it is owned by the City of Pacifica," and that "the existing seawall has approximately 40 years of life remaining." Therefore, it appears that the conclusions for wave overtopping are based on the presumption that the aging seawall will remain for the life of the development, despite the seawall's expected life being shorter than the economic life for the development and the LCP's prohibition on new development which utilizes seawalls as a mitigation measure. Further, from the materials provided, it does not appear that the wave overtopping analysis accounted for potential increased water levels from the combination of wave action, and storm surge with sea level rise. In addition, it is not clear that the riprap revetment directly north and adjacent to the northwest edge of the project site has been similarly evaluated and includes the same type of setback. Thus, the potential wave overtopping and erosion from the northwest end of the property, potentially affecting long term access to the development, has not been sufficiently addressed. Therefore, it is not clear that the development has been adequately sited and designed in a manner as to not require shoreline protection over the economic life of the development, inconsistent with the LCP requirements.

Commission staff recommends that the above questions be addressed prior to project approval. As our previous letter suggested, the City should also consider conditions of approval which require regular monitoring of the bluff and triggers for retreat following bluff erosion or failure of the seawall, as well as triggers for project reevaluation following significant flood events. Lastly, future shoreline protection should not be allowed to be constructed *solely* to protect the proposed development.

We appreciate the ability to provide comments on this matter, and should you have questions regarding these comments, please do not hesitate to contact me (415.904.5250, Jeannine.manna@coastal.ca.gov) or North Central District Supervisor Stephanie Rexing (415.597.5894, Stephanie.rexing@coastal.ca.gov).

Sincerely,

Jeannine Manna
North Central Coast District Manager
California Coastal Commission